

# 2023-24 Undergraduate Bulletin



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GENERAL CATALOG

The purpose of this bulletin is to provide information about CMU's academic programs available in the 2023-24 academic year and information concerning admissions, academic regulations and requirements, services available to students, and CMU staff and faculty. For updates and corrections, see the website <https://bulletins.cmich.edu>

Students are responsible for ensuring that all requirements for graduation have been met. It is expected that students will regularly discuss their plans of study with academic advisors. Central Michigan University reserves the right to modify curricula, rules, policies, fees, program requirements, and courses offered and other information contained in this Bulletin at any time, without notice. The provisions of this bulletin do not constitute a contract, express or implied.

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# Welcome «



## **Welcome to Central Michigan University.**

From the moment you joined our university community, your success became our top priority. Our primary goal is to give you the knowledge, skills and tools necessary to succeed in life, both professionally and personally.

You have joined a diverse community of learners and leaders who believe in the power of education to transform lives and the world. Our faculty, staff and administrators are here to provide you with a positive learning experience in an inclusive, supportive environment.

While you are here, you will take classes in state-of-the-art classrooms, learn from faculty who are experts in their fields and engage in hands-on learning. You also will have the opportunity to explore your interests and passions through one of nearly 400 registered student organizations, and to hone your leadership skills through our nationally recognized leadership development programs.

Hands-on learning is a hallmark of a CMU education, and you will have plenty of opportunities to put your knowledge and skills to work in the classroom, in the field and in the community. Many of our students connect their talents and passion by serving communities in Michigan and around the world through volunteer and service-learning projects. They complete internships and field experiences, and they travel the world through study abroad.

We focus on the teamwork, critical thinking and problem-solving, skills that make CMU graduates attractive to top employers. We have been recognized by employers throughout the state and around the nation as a top recruiting university. We emphasize the real-world experience you will need to take the next steps on your journey. And, when you complete your degree, you'll join a worldwide network of more than 246,000 proud alumni.

Use this bulletin to explore the many educational opportunities offered here at CMU. Whether you are enrolling in your first class or preparing for your final semester, we thank you for allowing us to play a role on your educational journey.

Be well,

A handwritten signature in black ink, appearing to read "R. O. Davies". The signature is stylized with a large, sweeping "D" and a long horizontal line extending to the right.

Robert O. Davies, Ph.D.  
President

## Administration

### Board of Trustees

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<b>Ms. Sharon L. Heath</b> , Novi	2028
<b>Dr. Denise Williams Mallett</b> , Detroit	2030
<b>Mr. Isaiah M. Oliver</b> , Flint	2024
<b>Mr. Edward J. Plawecki</b> , Plymouth	2026
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<b>Dr. Michael A. Sandler</b> , West Bloomfield	2024

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**Reneé Watson** (2022) Vice President/Student Affairs; Ed.D., Northern Kentucky University; M.Ed., University of Missouri; B.G.E., University of Kansas

**David Weindorf** (2020) Vice President/Research & Innovation, Research & Graduate Studies; B.S., M.S., Ph.D., Texas Tech University

*\*The year in parentheses behind each name indicates the date first employed by the University.*



## Accreditation, Assessment, and Faculty

### Accreditation

Institutional accreditation has been granted to nearly 4,000 higher education institutions throughout the United States. This accreditation is awarded by one of six organizations, each historically focusing on a specific region of the country. Accreditation is recognized by the U.S. Department of Education and federal financial aid is typically only available to students attending schools that are accredited.

Central Michigan University was first accredited in 1915 by the North Central Association of Colleges and Schools (NCA) as Central State Teachers College and has been accredited since, with the exception of 1922-23. NCA accredited the first master's program in 1957 and approved the offering of doctoral programs in 1992. The last comprehensive evaluation took place in 2015-2016, at which time CMU received reaffirmation of its accreditation for 10 years. The current accrediting body is now known as The Higher Learning Commission (HLC) and is located at 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1411; [www.hlcommission.org](http://www.hlcommission.org).

A number of CMU programs have been reviewed and accredited by one or more specialized accrediting organizations. The teacher education programs are accredited by the Council for Accreditation of Educator Preparation (CAEP). CMU's education programs leading to certification are also approved by the Michigan Department of Education. The College of Business Administration is accredited by the AACSB International - The Association to Advance Collegiate Schools of Business. This accreditation covers all undergraduate and master's degree programs in business offered by the College. AACSB International is the premier accrediting agency and service organization for business schools.

Other programs hold national accreditation by one or more of the following organizations: ABET (<http://www.abet.org>); Accreditation Council for Continuing Medical Education; Accreditation Council for Education in Nutrition and Dietetics; Accreditation Review Commission on Education for the Physician Assistant, Inc.; Accrediting Council of Education in Journalism and Mass Communication; American Chemical Society; American Psychological Association<sup>1</sup>; American Society for Biochemistry and Molecular Biology; Association of University Programs in Health Administration; Commission on Accreditation in Physical Therapy Education; Commission on Accreditation of Athletic Training Education; Commission on Collegiate Nursing Education; Commission on Sport Management Accreditation; Committee on Accreditation for the Exercise Sciences; Council for Accreditation of Counseling and Related Education Programs; Council for Interior Design Accreditation; Council on Academic Accreditation in Audiology and Speech-Language Pathology; Council on Accreditation of Parks, Recreation, Tourism, and Related Professions; Council on Education for Public Health; Council on Social Work Education; Liaison Committee on Medical Education; National Association for the Education of Young Children (includes CMU's Human Growth and Development Pre-School Lab); National Association of School Psychologists; National Association of Schools of Art and Design; National Association of Schools of Music; National Council on Family Relations; National Environmental Health Science and Protection Accreditation Council; Network of Schools of Public Policy, Affairs and Administration.

<sup>1</sup>Questions related to Psychology programs' accredited status should be directed to:

Commission on Accreditation:  
Office of Program Consultation and Accreditation  
American Psychological Association  
750 First Street, NE, Washington, DC 20002  
Phone: 202-336-5979  
E-mail: [apaaccred@apa.org](mailto:apaaccred@apa.org)  
Web: [www.apa.org/ed/accreditation](http://www.apa.org/ed/accreditation)

Individuals who wish to review the accreditation documents should

contact Licensure, Regulatory Services & Human Capital. Further information regarding specific program accreditation status is located at: <https://www.cmich.edu/offices-departments/academic-affairs/higher-learning-accreditation-commission/specialized-professional-accreditation>.

### Student Learning Outcomes Assessment

To assure that Central Michigan University's programs are strong and that students in them are attaining appropriate levels of knowledge, skills, beliefs and attitudes, the faculty and staff of Central Michigan University have developed ongoing processes to assess the learning and academic achievement of students in academic programs. Through this process, faculty carefully articulate program goals and learning outcomes while focusing experiences and assignments to prepare students to achieve those outcomes. An assessment plan is developed to measure progress toward the student learning outcomes, data are collected, and annual reports are developed and discussed by department faculty, chairs, and deans. An action plan is designed to drive program improvement.

Students participate in a wide range of assessment activities designed to provide useful information about the effectiveness of academic programs. From time to time during their courses of study, CMU students may be asked to demonstrate the breadth and depth of their knowledge, skill, beliefs and attitudes. We ask alumni their views about programs and their careers since graduation with regard to how well CMU's programs have met their needs. In addition, we ask employers what qualities they desire and expect of CMU's graduates. These efforts all combine to improve student learning and program quality and form the basis of our culture of continuous improvement in support of CMU's commitment to excellence.

### Faculty

While students are the heart and soul of Central Michigan University, our faculty and staff are the backbone. Central Michigan University ensures that all faculty responsible for developing curriculum possess the academic preparation, training, and experience to teach in an academic setting, meet or exceed the minimum requirements of accrediting bodies, and accomplish the mission of the institution.

When determining qualifications of its teaching faculty, Central Michigan University considers, where appropriate, undergraduate and graduate degrees, related work experiences, professional licenses and certifications, or other demonstrated competencies and achievements that contribute to effective teaching.

**Online Faculty.** The distinctive character and flexible course schedules of CMU Online attract leaders from a variety of fields. Instruction is provided by CMU's expert full-time faculty and by CMU's part-time instructors who also serve as public officials, practicing specialists, and leaders in business and industry.

The academic credentials of CMU part-time instructors are approved by the appropriate academic department of the university. In addition, part-time instructors of graduate courses are approved by the Office of Graduate Studies. These part-time instructors are contracted separately for each class.

Central Michigan University has approximately 400 approved part-time instructors, recruited to teach on a course-by-course basis.

## University Calendar

### Mount Pleasant Campus\* Tentative

Summer Sessions	2023	2024	2025
<b>First Session (Six Weeks)</b>			
Classes Begin	May 15	May 13	May 19
Memorial Day Recess	May 29	May 27	May 26
Classes End	June 22	June 20	June 26
Grades Due	June 27	June 25	July 1
<b>Second Session (Six Weeks)</b>			
Classes Begin	June 26	June 24	June 30
Independence Day Recess	July 4	July 4	July 4
Classes End	Aug. 3	Aug. 1	Aug. 7
Grades Due	Aug. 8	Aug. 6	Aug. 12
<b>Fall Semester</b>	<b>2023**</b>	<b>2024**</b>	<b>2025**</b>
Faculty Preparation Week Begins	Aug. 21	Aug. 19	TBD
Classes Begin	Aug. 28	Aug. 26	TBD
Labor Day Recess	Sept. 4	Sept. 2	TBD
Fall Break	Oct. 16-17	TBD	TBD
Thanksgiving Recess (5:00 p.m. Wed - 8:00 a.m. Mon.)	Nov. 22-27	Nov. 27-Dec. 2	TBD
Classes End	Dec. 9	Dec. 7	TBD
Examination Week	Dec. 11-15	Dec. 9-13	TBD
Semester Ends	Dec. 16	Dec. 14	TBD
Commencement Weekend	Dec. 15-17	Dec. 13-15	TBD
Grades due	Dec. 20	Dec. 18	TBD
<b>Spring Semester</b>	<b>2024**</b>	<b>2025**</b>	<b>2026**</b>
Faculty Preparation Week Begins	Jan. 4	Jan. 9	TBD
Classes Begin	Jan. 8	Jan. 13	TBD
Martin Luther King Jr. Day (no classes)	Jan. 15	Jan. 20	TBD
Spring Recess 1:00 p.m. Sat -8:00 a.m. Mon.	Mar. 2-11	Mar. 8-17	TBD
No Classes	Mar. 28-29	TBD	TBD
Classes End	Apr. 27	May 3	TBD
Examination Week	Apr. 29-May 3	May 5-9	TBD
Semester Ends	May 4	May 10	TBD
Commencement Weekend	May 3-5	May 9-11	TBD
Grades due	May 8	May 14	TBD

See <https://www.cmich.edu/offices-departments/registrars-office/calendars> for updates to calendars.

See <https://www.cmich.edu/offices-departments/registrars-office/calendars/registration-schedule> for registration deadlines.

\*See <https://www.cmich.edu/academics/innovation-online/cmu-online/CMU-online-academic-calendar> for CMU Online academic calendar.

\*\*Subject to future Faculty Association collective bargaining.

## CMU - A Brief History

More than 25 years into its second century as an institution of higher learning, Central Michigan University is focused on creating a caring and engaging environment where students achieve success.

Central opened its doors on Sept. 13, 1892, as the Central Michigan Normal School and Business Institute, with classes in teaching, business, and stenography. At that time, few Michigan teachers received any formal training in teaching, so school founders made teacher training their mission in founding the state's second normal school.

Thirty-one students attended classes in second-floor rooms over an office at Main and Michigan streets in downtown Mount Pleasant. Most students at the time were eighth grade graduates, attending the "Normal" for a few weeks or months prior to beginning their careers as teachers. Within the first two years, land was acquired, and a \$10,000 Normal School Building was constructed where Warriner Hall now stands.

In 1895, the Michigan State Board of Education assumed control of the school, which had grown to 135 students, renaming it Central Michigan Normal School. By 1918, the campus consisted of 25 acres with five buildings, one of which — Grawn Hall — is still in use, though substantially expanded and upgraded. Enrollment had more than tripled in 10 years to 450 students. In 1925, a fire destroyed the school's main building, and Warriner Hall was built to replace it.

Throughout this time, Central's educational offerings also were growing more comprehensive. In 1903, students completing two years of schooling beyond high school began receiving their life teaching certificates. In 1915, the school was accredited by the North Central Association for the first time. In 1918, the Bachelor of Arts degree was first awarded, followed by the Bachelor of Science in 1927. In 1938, Central offered its first graduate courses.

Before World War II, the school's name changed again — first to Central State Teachers College, then to Central Michigan College of Education — while enrollment rose to more than 1,800 students.

In the postwar years of 1949-59, the first large student residence halls were built, and the North Central Association accredited Central's first master's degree.

On June 1, 1959, with 40 buildings on a 235-acre campus and an enrollment of 4,500 students, Central was renamed Central Michigan University, a designation that reflected growth in the complexity of the school's academic offerings as well as its physical growth in the postwar period.

Through the 1960s, enrollment grew from 4,500 to more than 14,000 students. The enormous rate of growth caused significant change in the character of the university. Buildings were constructed on the land south of Preston Street, more than doubling the physical size of the campus.

The gift of Neithercut Woodland near Farwell and the establishment of CMU's Biological Station on Beaver Island gave the university valuable facilities for specialized studies.

The number and variety of programs also grew. Programs in business and communications were developed and expanded. In 1971, the Institute for Personal and Career Development was established to provide academic programs for students with limited access to traditional forms of education.

The Specialist in Education degree marked CMU's entry into training beyond the master's degree level. In the early 1970s, CMU began offering doctoral programs in psychology. Today, CMU provides more than 40 master's degree programs, 30 graduate certificates, 18 doctoral programs, and two specialist degrees. Seventeen master's degree programs have accelerated bachelor's-to-master's admissions, which allow undergraduate students at CMU to reduce the total number of credits required to complete their undergraduate and graduate degrees.

The technological advances of the 1980s spurred further program expansion, especially throughout the sciences. Other construction followed, including the Dow Science Complex, Applied Business Studies Complex, and the Student Activity Center. CMU's Global Campus continued to grow, as well, and the university offered its first online courses in 1994 to students around the world.

Campus continued to add academic, athletic, and residential buildings through the 1990s and 2000s. The modern Music Building opened in 1997, followed by a \$50 million expansion of Park Library in 2002, the state-of-the-art Health Professions Building and several residence halls in 2003, the technologically advanced and LEED-certified Education and Human Services Building in 2009, and the CMU Events Center in 2010. In 2012, CMU opened its College of Medicine Building.

In addition, the technologically cutting-edge Biosciences Building — the largest capital project in CMU history — opened for classes in January 2017. The facility serves students and faculty in biological science disciplines from molecular biology and biochemistry to biology of organisms and ecology. It houses research-active faculty members and provides classroom and laboratory space.

Grawn Hall, home of the College of Business Administration, was upgraded and expanded in fall 2017. In January 2020, the new 50,000-square-foot Center for Integrated Health Studies opened, allowing CMU health care programs to expand.

Even though so much has changed over the past two centuries, CMU's values today reflect those inscribed upon its seal in 1892: Sapientia, Virtus, Amicitia – wisdom, virtue, friendship.

### Presidents of the University

Charles F. R. Bellows	1892 - 1896	Arthur E. Ellis	1985 - 1988
Charles McKenny	1896 - 1900	Edward B. Jakubauskas	1988 - 1992
Charles T. Grawn	1900 - 1918	Leonard E. Plachta	1992 - 2000
Eugene C. Warriner	1918 - 1939	Michael Rao	2000 - 2009
Charles L. Anspach	1939 - 1959	Kathleen M. Wilbur	2009 - 2010
Judson W. Foust	1959 - 1968	George E. Ross	2010 - 2018
William B. Boyd	1968 - 1975	Robert O. Davies	2018-Present
Harold Abel	1975 - 1985		

## CMU Today

Central Michigan University serves nearly 15,500 students on its Mount Pleasant campus and through flexible online programs anywhere in the world.

In each of the university's approximately 300 undergraduate, master's, specialist, and doctoral programs, CMU students get their hands on real-world learning to help them achieve their educational goals. Whether in the arts, media, business, education, human services, health professions, liberal arts, medicine, social sciences, science, and engineering, CMU Chippewas graduate with the experience they need to launch their careers.

With accomplished professors, there are countless opportunities for students to engage in applied research in world-class facilities. CMU is committed to providing students with a superior learning environment and global perspective to compete in an increasingly complex world.

CMU's impact and influence extend far beyond its main campus into the state, nation, and world.

- CMU is one of four institutions nationally, and 14 globally, certified as a Celonis Academic Center of Excellence.
- The Honors Program administers the prestigious Centralis Scholarship Program and oversees approximately 200 faculty-mentored honors undergraduate capstone projects annually.
- Thousands of students work through the Mary Ellen Brandell Volunteer Center to help others locally, nationally and around the world.
- CMU's Alternative Breaks program ranks first in Michigan and is consistently ranked in the top 5 nationally for the number of Alternative Break trips according to Break Away.
- Leadership Safari, a five-day leadership experience for new students, has 2,000 students participate each year, led by nearly 300 student staff volunteers.
- CMU received a gold level ranking from the Michigan Veterans Affairs Agency.
- CMU is one of only two Adobe Creative Campuses in Michigan, which allows students to expand their digital literacy skills and enables them to design and create images, websites, videos, podcasts and more.
- CMU was named the US EPA's 2020 WasteWise College Partner of the Year and the 2021 US EPA WasteWise national narrative Sustainability Public Education Award winners. CMU holds a STARS rating from the Association for the Advancement of Sustainability in Higher Education (AASHE) through 2024.

### Cutting-edge Student Research

CMU is among just 6% of universities classified by the Carnegie Foundation for the Advancement of Teaching as a Carnegie R2 research institution. R2 indicates a high level of research activity in a smaller university setting.

Students conduct cutting-edge research in Parkinson's and Alzheimer's diseases, help create biofuels and longer-lasting batteries, develop improved methods of water purification and more. In addition, with the university's second \$10 million Environmental Protection Agency grant in six years, CMU researchers lead the way in efforts to protect and restore coastal wetlands vital to the overall health of the Great Lakes through CMU's Institute for Great Lakes Research. CMU also was the first public university in the Midwest with a MakerBot Innovation Center, a large-scale 3D printing installation. CMU's Biosciences Building is home to an electron microscope facility used for research in a variety of areas throughout the university.

### Culture, Community, Resources

CMU's main campus is in Mount Pleasant, a community that blends small-town living and big-city amenities. It's part of Michigan's culturally varied and vibrant Great Lakes Bay Region that also includes Saginaw; Bay City; Midland; and the state's largest Native American community, centered on the Saginaw Chippewa Isabella Reservation in Mount Pleasant.

Other major Michigan destinations and attractions — Lansing, Grand Rapids, Detroit, Traverse City, wineries, beaches, golf, and ski resorts, and many more — are within easy reach of the city's central location in Michigan's Lower Peninsula.

Mount Pleasant is the seat of Isabella County and home to more than 25,000 of the growing county's nearly 70,000 people. The community offers natural beauty, family attractions and small-town life complemented by university culture. Friends and family are always welcome to explore CMU's park-like campus and attend plays, concerts, speeches, athletic events, library exhibits, summer camps and much more. Features include:

**Culture and Entertainment.** University Theatre, University Events, the School of Music, and the student-run Program Board offer year-round world-class plays, entertainment, and other exciting activities. With more than 94,000 square feet of space, the John G. Kulhavi Events Center serves the cultural and entertainment needs of the campus and community, hosting a wide variety of events, from commencements to concerts to speaking engagements to business expos.

**Athletics.** CMU has won almost 100 Mid-American Conference championships in 15 different sports, and the football program has participated in a postseason bowl game in 10 of the past 15 years. CMU won the league's top award, the Cartwright Award for overall excellence, in 2009 and 2015, and the department also earned three consecutive MAC Institutional Sportsmanship awards from 2015-17. CMU's student-athletes have averaged a GPA of 3.0 or higher for 45 straight semesters.

**Charles V. Park Library.** Central Michigan University's Park Library houses more than 275 computers for student use and provides access to more than 800,000 print books, 900,000 electronic books, 250 databases, access to the full-text content of 150,000 journals, and more than 125,000 multimedia items. Electronic collections are accessible around the clock, from both on and off campus. The library's 1 North Study Room is open 24 hours a day, seven nights a week for extended hours study. The Clarke Historical Library, located along the main corridor of the library, regularly displays items from its extensive holdings of materials about local and Michigan history, Native American history, books for children and young adults, the life and writings of Ernest Hemingway, as well as CMU history.



# Vision, Mission, Values, and Strategic Plan

## Vision Statement

Central Michigan University, an inclusive community of scholars, is a national leader in higher education inspiring excellence and innovation.

*Adopted by the Board of Trustees, December 6, 2012*

## Mission Statement

At Central Michigan University, we are a community committed to the pursuit of knowledge, wisdom, discovery, and creativity. We provide student-centered education and foster personal and intellectual growth to prepare students for productive careers, meaningful lives, and responsible citizenship in a global society.

*Adopted by the Board of Trustees, December 2, 2010*

## Core Values

To achieve our mission, we adhere to the core values of integrity, respect, compassion, inclusiveness, social responsibility, excellence, and innovation.

*Adopted by the Board of Trustees, December 2, 2010*

## Definition of Mission Statement Core Values

- **Integrity:** A steadfast adherence to the principles of honesty, trustworthiness, reliability, transparency, and accountability.
- **Respect:** Consideration of the rights, opinions, and ideas of others in a civil, fair, and thoughtful manner.
- **Compassion:** Empathy, concern and support for the needs and challenges of others.
- **Inclusiveness:** Conducting the activities of the university in a way that embraces shared governance, inspires tolerance, and welcomes diversity into our community.
- **Social Responsibility:** Fostering citizenship to promote the public good, environmental sustainability, global understanding, and informed political engagement.
- **Excellence:** Expectation that all activities are conducted with attention to quality and the highest levels of academic and professional standards.
- **Innovation:** Supporting progressive and meaningful research, creative activity, and teaching. Addressing challenges and issues from multiple perspectives to solve problems and advance knowledge.

## Strategic Plan: Advancing Excellence

### Imperative I: Nurturing Student Success

CMU provides a transformative education to prepare students for successful careers and fulfilling lives. Successful students complete their programs of study in a reasonable amount of time and are well prepared for careers and/or postgraduate study. Alumni perceive their CMU education as a sound investment.

### Imperative II: Fostering Scholarly Activity

CMU encourages a scholarly environment that attracts and fosters talented and diverse students, faculty and staff. Scholarship is essential to the intellectual life of a university and its accreditation. We embrace a broad view of scholarship, recognizing the value of theoretical and applied research, field-specific and interdisciplinary research, creative efforts, artistic performances, and pedagogical inquiry.

### Imperative III: Strengthening Partnerships in Michigan and Beyond

CMU values community partnerships. We will emphasize partnerships with alumni, communities, corporations, government agencies and nonprofit organizations that lead to mutual growth and enhancement, starting with those in Michigan and going beyond to our country and the world.

*Adopted by the Board of Trustees, June 29, 2017*

## The Enduring Philosophy

In its 128 years as an institution of higher learning, Central Michigan University has supported a liberal arts education as the common base for all degree programs. In the words of a founder, "Education in its best and truest sense is a much larger thing than any or even all of the so-called practical uses that may be made of it. Accordingly...the school shall stand squarely and strongly for the larger idea, that education is a rightful heritage of the human soul...Breadth and liberality of scope will always prove the better investment in the long run."



## Academic Overview

### Undergraduate Degrees

Bachelor of Applied Arts  
 Bachelor of Arts  
 Bachelor of Fine Arts  
 Bachelor of Individualized Studies  
 Bachelor of Music  
 Bachelor of Music Education  
 Bachelor of Science  
 Bachelor of Science with an option in Community Development  
 Bachelor of Science in Athletic Training (BSAT/MSAT 3+2 program)  
 Bachelor of Science in Business Administration  
 Bachelor of Science in Computer Engineering  
 Bachelor of Science in Education  
 Bachelor of Science in Electrical Engineering  
 Bachelor of Science in Engineering Technology  
 Bachelor of Science in Environmental Engineering  
 Bachelor of Science in Mechanical Engineering  
 Bachelor of Science in Nursing (RN-to-BSN)  
 Bachelor of Social Work

### Undergraduate Certificates:

An Undergraduate Certificate signifies completion of certain prescribed coursework. Certificates are offered in African and African Diaspora Studies; Applied Forensic Studies; Cartographic Design; Citizenship Engagement; Cloud Computing; Corporate Video; Creative Writing; Critical Reasoning; Cultural Competency; Cybersecurity; Database Development; Deaf and Hard-of-Hearing Studies; Deafblind Intervener; Drone Regulations, Operations, and Applications; East Asian Studies; Entrepreneurial Studies; Environmental Justice; Global Governance and Advocacy; Integration of Science, Technology and Engineering (InSciTE); International Non-Governmental Organization (NGO) Administration; International Security Studies; Latin American and Latino Studies; Lawmaking and Legal Processes; Mobile Computing; Native American and Indigenous Studies; Network Administration; Political Advocacy and Elections; Professional Communication and Presentation Skills; Public and Social Entrepreneurship; Social Media, and Translation (English and Spanish); Web Development.

### Accelerated Admissions for Graduate Programs

See page 35 for further information.

Administration (MSA)  
 Apparel Product Development & Merchandising Technology (MS)  
 Applied Statistics and Analytics (MS)  
 Business Administration (MBA)  
 Communication (MA)  
 Computer Science (MS)  
 Creative Writing (MA)  
 Economics (MA)  
 Engineering (MS)  
 Entrepreneurial Ventures (MEV)  
 Geographic Information Science (MS)  
 Higher Education Administration and Social Justice (MA)  
 History (MA)  
 Mathematics (MA)  
 Psychology, Experimental (MS)  
 Public Administration: State and Local Government Concentration (M.P.A.)  
 Public Health (MPH)  
 Special Education: The Master Teacher (MA)  
 Sport Administration (MA)  
 Structured Language & Literacy (Graduate Certificate)

### Graduate Degrees

*See the next page.*

### Colleges of the University

#### College of the Arts and Media

Department of Art and Design  
 School of Communication, Journalism, and Media  
 School of Music  
 Department of Theatre and Dance

#### College of Business Administration

School of Accounting  
 Department of Business Information Systems  
 Department of Economics  
 Department of Entrepreneurship  
 Department of Finance and Law  
 Department of Management  
 Department of Marketing, Hospitality, and Logistics

#### College of Education and Human Services

Department of Counseling, Educational Leadership, and Higher Education  
 Department of Fashion, Interior Design, and Merchandising  
 Department of Human Development and Family Studies  
 Department of Recreation, Parks, and Leisure Services Administration  
 Department of Teacher and Special Education

#### The Herbert H. and Grace A. Dow College of Health Professions

Department of Communication Sciences & Disorders  
 School of Health Sciences  
 Department of Physical Education and Sport  
 Department of Physical Therapy  
 School of Rehabilitation and Medical Sciences

#### College of Liberal Arts and Social Sciences

Department of English Languages and Literature  
 Department of History, World Languages, and Cultures  
 Department of Military Science  
 Department of Philosophy, Anthropology, and Religion  
 School of Politics, Society, Justice, and Public Service  
 Department of Psychology

#### College of Medicine

#### College of Science and Engineering

Department of Biology  
 Department of Chemistry and Biochemistry  
 Department of Computer Science  
 Department of Earth and Atmospheric Sciences  
 School of Engineering & Technology  
 Department of Geography and Environmental Studies  
 Department of Mathematics  
 Department of Physics  
 Department of Statistics, Actuarial, and Data Sciences

## Graduate Studies

### Graduate Studies

251 Foust; 989-774-6777; E-mail: [grad@cmich.edu](mailto:grad@cmich.edu); Web page: <https://www.cmich.edu/offices-departments/office-research-graduate-studies/graduate-studies>

Central Michigan University enrolls graduate students from all areas of the United States and from around the world. Students interested in graduate degree programs are encouraged to visit the Graduate Studies website at [www.grad.cmich.edu](http://www.grad.cmich.edu). Students may also send an email to [grad@cmich.edu](mailto:grad@cmich.edu) or call 989-774-4723 for more information. Graduate course descriptions and detailed information on graduate programs are available in the Graduate Bulletin.

### Concurrent Enrollment (Undergraduate and Graduate)

Undergraduate students who have been admitted to an Accelerated Master's Degree Program or who have no more than twelve undergraduate credits remaining to complete their bachelor's degree may apply for Concurrent Admission, which enables students to register for graduate credit for the semester or session in which requirements will be completed for their bachelor's degrees. Concurrent admission is granted only to those who would qualify for admission to graduate study at the end of the concurrent session.

### Programs

#### Master of Science in Administration

MSA	Digital Management
MSA	Emergency Management and Homeland Security
MSA	Engineering Management
MSA	General Administration
MSA	Health Services Administration
MSA	Human Resources Administration
MSA	International Administration
MSA	Leadership
MSA	Logistics and Acquisitions
MSA	Philanthropy and Nonprofit Organizations
MSA	Project Management
MSA	Public Administration
MSA	Recreation and Park Administration ( <i>online program</i> )
MSA	Research Administration
MSA	Talent Development

#### MSA Graduate Certificates

Administrative Essentials  
 Digital Management  
 Emergency Management and Homeland Security  
 Engineering Management  
 General Administration  
 Health Services Administration  
 Human Resources Administration  
 International Administration  
 Leadership  
 Logistics and Acquisitions  
 Philanthropy and Nonprofit Organizations  
 Project Management  
 Public Administration  
 Recreation and Park Administration  
 Research Administration  
 Talent Development

### College of the Arts and Media

#### School of Communication, Journalism, and Media

MA	Broadcast and Cinematic Arts: Electronic Media Mgt.
MA	Broadcast and Cinematic Arts: Electronic Media Prod.
MA	Broadcast and Cinematic Arts: Electronic Media Studies
MA	Broadcast and Cinematic Arts: Film Theory & Criticism
MA	Communication

#### School of Music

MM	Composition
MM	Conducting
MM	Music Education
MM	Performance

### College of Business Administration

MBA	Business Administration
	Graduate Certificate in Enterprise Systems

#### Department of Business Information Systems

MS	Information Systems
	Graduate Certificate in Cybersecurity

#### Department of Economics

MA	Economics
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### College of Education and Human Services

#### Interdisciplinary and Interdepartmental Programs

MA	Education: Curriculum and Instruction
MA	Education: Training and Development
	Graduate Certificate in Disability Studies and Community Inclusion

#### Department of Counseling, Educational Leadership, and Higher Education

MA	Counseling: School Counseling
MA	Counseling: Clinical Mental Health Counseling
MA	Counseling: Addiction Counseling
MA	Educational Leadership
MA	Higher Education Administration
EdS	General Educational Administration
EdD	Educational Leadership
	Graduate Certificate in Equity-Centered Teaching and Learning

#### Department of Fashion, Interior Design, and Merchandising

MS	Apparel Product Development & Merchandising Technology
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#### Department of Teacher and Special Education

MA	Learning, Design, and Technology
MA	Reading and Literacy K-12
MA	Special Education: The Master Teacher
DET	Educational Technology
	Graduate Certificate in Learning, Design, and Technology

## The Herbert H. and Grace A. Dow

### College of Health Professions

#### Department of Communication Sciences & Disorders

- MA Speech-Language Pathology
- AuD Audiology
- Graduate Certificate in Structured Language & Literacy Intervention

#### School of Health Sciences

- MS Exercise Physiology
- MHA Health Administration
- MPH Public Health: Public Health Practice Concentration
- DHA Health Administration
- Graduate Certificate in Health Systems Leadership
- Graduate Certificate in International Health

#### Department of Physical Education & Sport

- MA Sport Administration

#### Department of Physical Therapy

- DPT Physical Therapy

#### School of Rehabilitation and Medical Sciences

- MS Physician Assistant
- MS Nutrition & Dietetics
- MSAT Athletic Training

### College of Liberal Arts and Social Sciences

#### Department of English Language and Literature

- MA Creative Writing

#### Department of History, World Languages, and Cultures

- MA History
- MA History - Joint

#### Department of Politics, Society, Justice, and Public Services

- MPA Public Administration
- MPA Public Administration: Nonprofit Management
- MPA Public Administration: State & Local Government
- Graduate Certificate in Nonprofit Leadership

#### Department of Psychology

- MS Experimental Psychology
- MA Industrial/Organizational Psychology
- SPsyS Psychological Services
- PhD Clinical Psychology
- PhD Applied Experimental Psychology
- PhD Industrial/Organizational Psychology
- PhD School Psychology

### College of Medicine

- MD Medicine

#### Health Affairs

#### Neuroscience (Interdisciplinary)

- MS Neuroscience
- PhD Neuroscience

### College of Science and Engineering

#### Interdisciplinary and Interdepartmental Programs

- MS Biochemistry, Cell and Molecular Biology
- PhD Biochemistry, Cell and Molecular Biology
- PhD Earth and Ecosystem Science
- PhD Science of Advanced Materials

#### Department of Biology

- MS Biology
- MS Biology - Conservation

#### Department of Chemistry and Biochemistry

- MS Chemistry

#### Department of Computer Science

- MS Computer Science

#### School of Engineering and Technology

- MS Engineering

#### Department of Geography and Environmental Studies

- MS Geographic Information Science
- Graduate Certificate in Health Geographic Information Systems

#### Department of Mathematics

- MA Mathematics
- PhD Mathematical Sciences

#### Department of Physics

- MS Physics
- PhD Physics

#### Department of Statistics, Actuarial, and Data Sciences

- MS Applied Statistics and Analytics
- PhD Statistics and Analytics
- Graduate Certificate in Actuarial Science
- Graduate Certificate in Data Mining

*For a list of programs offering accelerated admissions, see page 10.*

*Some programs are offered online or at satellite locations. See the [CMU website](#) for more information.*



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## Innovation and Online

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CMU Online  
Central Michigan University  
802 Industrial Drive  
Mount Pleasant, Michigan 48858  
800-950-1144  
Or visit the website at [online.cmich.edu](http://online.cmich.edu)

Since 1971, a goal of Central Michigan University is to provide academic programs for students whose career or personal circumstances limit their access to traditional forms of higher education. CMU Online was established to help meet that goal.

Using flexible scheduling and compressed class formats, CMU offers graduate and undergraduate degree programs to thousands of students each year.

Combining the university's high academic standards with innovative teaching technologies and strategies, CMU is prepared to:

1. Translate career and other forms of prior learning into academic credit.
2. Provide flexible instructional, curricular and scheduling patterns.
3. Tailor programs through individualized advising.
4. Provide for wide use of internships, independent study, and other forms of individualized study.

### Student Success Network

Each student is assigned a success network comprised of online support staff, academic advisors, faculty advisors, financial advisors, and career coaches in addition to the services provided across campus. This group helps their students navigate from the start of their educational journey through graduation and beyond.

### CMU Online Courses

Online course delivery provides each student with a virtual classroom where engaging lectures, multimedia study materials and class discussions are all provided using the latest technology. Interactive online tools offer students the opportunity to connect with faculty and peers to discuss course content. Online courses still have specific start and end dates and assignment/ exam due dates. Careful review of the course syllabus prior to the enrollment in a course will provide these dates. Questions regarding online courses should be directed to staff at [onlineprograms@cmich.edu](mailto:onlineprograms@cmich.edu) or 800-950-1144.

To ensure success in online classes, CMU encourages students to familiarize themselves with the online learning environment prior to enrolling in CMU Online courses. Preview a sample online class, run a diagnostics check on your computer and take the Online Learning Assessment on our website at: <https://www.cmich.edu/admissions-aid/global-campus/cmu-online>.

### Prior Learning Assessment Program

The Prior Learning Assessment Program provides academic recognition of college-level skills and knowledge acquired outside the formal college classroom for undergraduate and graduate degree programs. Credit may be earned for learning acquired through career and personal experiences in job-related activities, in community participation, or from training experiences through related on-the-job instruction or special schools. Students using the prior learning program can save time and money towards completing a degree.

Students who apply for Prior Learning credits submit a comprehensive portfolio which describes and documents their learning experiences. Evaluation is dependent on performance criteria established by a team of university faculty members.

Students who earn credit through the Prior Learning Assessment Program must complete five (5) semester hours of credit from CMU before the prior learning credits will be recorded on their transcripts.

On-campus students may also apply for Prior Learning Assessment Credit.

### Planned Experiences

Planned experiences, available to undergraduate students, provide an individualized learning experience which synthesizes the theoretical and practical in one learning context. The planned experience is a student-formulated project on an approved topic (or topics) in the student's area of study. The project integrates experience with principles and theories in the field. Projects are formulated with the assistance of an advisor, and both the proposal and the final form are reviewed by the Program Director.

### Non-Degree and Non-Credit Programs

CMU provides an opportunity for educators and educational administrators to earn credit toward certificate renewal and provides individuals interested in personal development with a range of non-credit programs. Broad in its offerings, there is something for everyone across the lifespan.

### Non-Degree Credit for the Education Market

Through the District Designed Professional Development (DDPD) program, school districts and ISDs can design a university credit component for site-based professional development programs. The DDPD program offers educators and administrators with an opportunity to earn credits toward certificate renewal.

## Non-Credit Options

### Corporate and Education Training

CMU is able to partner with corporations to assist them with the learning and development needs within their organizations.

### Life-Long Learning

If you are interested in adventures in lifelong learning, look no further than active travel programs through Road Scholars. International in scope, learners of at least 55 years of age come together as a group of travelers to share a common destination and a passion for learning.

### Certification-to-Credit Program

The Certification-to-Credit Program at Central Michigan University is the perfect way to use a professional certification you have earned and apply it to the degree you want – saving you time and money. Students should consult with their advisor to determine what certifications can be used for select degree programs. More information can be found at the Certification-to-Credit website. <https://www.cmich.edu/academics/colleges/college-education-human-services/departments/masters-of-science-administration/student-resources/certification-to-credit>.

### Military and Veterans Services

For more information, see the next section of this Bulletin.

## For Academic Programs Leading to Professional Certification/Licensure

Federal Regulations require that Central Michigan University (CMU) publicly disclose information concerning programs that are designed to meet the educational requirements for professional certification/licensure ("professional licensure") in order to secure employment, regardless of the modality. These educational programs satisfy the Higher Learning Commission accreditation requirements and State of Michigan academic requirements. **However, completion of a CMU program may not meet the educational requirements for professional licensure in a state or U.S. Territory ("state") outside of Michigan.**

CMU makes every effort to offer current information on the educational requirements for professional licensure; however, state licensure requirements may change. Additionally, state licensure boards may require applicants to complete other requirements such as a background check, fingerprinting, years of experience, or professional examinations. If you are planning to pursue professional licensure outside of the state of Michigan, it is highly recommended that you contact the appropriate licensing entity in the state of your interest to seek information and guidance regarding professional licensure requirements before beginning an academic program.

Additionally, if your program leads to a professional licensure, authorization may be required from a state professional licensing board prior to beginning a clinical or field experience in that state. Please work directly with your program director prior to beginning an internship or field experience in another state.

Students relocating to a different state during a program should also keep in mind that since licensure requirements vary by state that locating to another state could impact whether the program meets licensure requirements in the new state. **If you are planning to locate to another state outside of the state of Michigan, it is highly recommended that you contact the appropriate licensing entity in the state to seek information and guidance regarding licensure requirements.**

Completion of a CMU degree does not guarantee employment in any profession. It is highly recommended, prior to enrollment, that students confirm all educational and licensure requirements in their chosen profession for their state of interest, e.g., Indiana.

Requirements for licensure, certification and/or endorsement eligibility may vary by state. You will find a dedicated webpage at <https://www.cmich.edu/admissions-aid/global-campus/professional->

[certification-licensure-disclosures](#) for each CMU College that lists programs designed to meet the educational requirements leading to professional certification/licensure, and whether that program meets/does not meet or if CMU has not yet determined if it meets the educational requirements in a particular state. CMU also provides the relevant state board links and highly recommends that you contact the appropriate licensing entity in your state of interest to seek information and guidance regarding licensure or certification requirements before beginning an academic program.

## Authorization

Central Michigan University complies with authorization requirements in the states/provinces in which it offers classes. Some states/provinces require that specific statements regarding an institution's status within the state be made available to students. The following statement is included here to fulfill the requirements of these states/provinces..

**Ontario, Canada:** "This program is offered under the written consent of the Ontario Ministry of Colleges and Universities granted for a seven-year term commencing on September 18, 2020. Prospective students are responsible for satisfying themselves that the program and the degree will be appropriate for their needs (e.g. acceptable to potential employers, professional licensing bodies or other educational institutions)."

Central Michigan University and its additional locations are accredited by the Higher Learning Commission. Students will generally find that CMU credits are transferable to any institution that accepts credits from appropriately accredited institutions, provided that the credits requested for transfer are relevant to the program the students plan to pursue. Students should contact any institution to which they may want to transfer credit to determine transferability.

## Program Offerings/Program Operations

CMU Online delivers undergraduate and graduate degrees in Michigan, and degree and certificate programs in other states, and Canada. Undergraduate degrees lead to a bachelor of applied arts degree with a major in administration, early childhood development and learning, entrepreneurship, fashion merchandising and design, or organizational leadership; a bachelor of science degree with an option in community development; a bachelor of science in business administration degree; a bachelor of science degree with a major in administration, early childhood development and learning, fashion merchandising and design, international relations, organizational leadership, political science, psychology, or public and nonprofit administration; a bachelor of science in education degree, standard certificate (early childhood and elementary education); or a bachelor of science in nursing. Undergraduate certificates are also offered in cybersecurity, DeafBlind intervener, entrepreneurial studies, citizen engagement, lawmaking and legal processes, and political advocacy and elections. Students may use an approved combination of transfer credit, prior learning credit, online courses, and on-site classes available at program locations to complete their baccalaureate degrees.

At the graduate level, studies lead to a master of arts degree in counseling, education, educational leadership, learning, design and technology, reading and literacy K-12, or special education; a master of business administration, a master of entrepreneurial ventures, a master of health administration, a master of public administration; a master of public health: public health practice, a master of science in nutrition and dietetics, a master of science in administration, master of science in information systems, a specialist in education, a doctor of education in educational leadership, a doctor of educational technology, or a doctor of health administration. In addition, graduate certificates are offered in administrative essentials, cybersecurity, digital management, emergency management and homeland security, engineering management, ERP using SAP software, general administration, health services administration, health systems leadership, human resources

administration, international administration, international health, leadership, logistics and acquisitions, philanthropy and non-profit organizations, project management, public administration, research administration, and training and development.

Central Michigan University will do everything within reason to help students meet their educational goals in the unforeseen event of a program closing or of a military location becoming permanently closed to civilian students. CMU is committed to helping students finish their educational programs.

## Curricular Programs

This section describes the curricular programs available through CMU Online. A general listing of the programs available at centers can be found at <https://www.cmich.edu/program-finder>.

### Undergraduate Degree Offerings

Requirements must be met in specific areas of study and a selected area of concentration. Undergraduate degrees require satisfactory completion of a minimum of 120 semester hours of credit and must meet the requirements of general education and the major. At least 30 semester hours must be earned with Central Michigan University. Programs are designed in consultation with an academic advisor.

Undergraduate credit may be earned in these areas by successful completion of courses, examination in the specified areas, or presentation of documented prior learning assessment credit.

Degrees include:

- Bachelor of Applied Arts (majors: Administration: Ergonomics Administration and Personnel Administration; Early Childhood Development and Learning Major; Entrepreneurship; Fashion Merchandising and Design Major: Product Development and Visual Merchandising concentrations; or Organizational Leadership Major)
- Bachelor of Science with an option in Community Development with concentrations in Community Services, Health Sciences, and Public Administration
- Bachelor of Science (majors: Administration: Ergonomics Administration and Personnel Administration concentrations; Early Childhood Development and Learning Major; Fashion Merchandising and Design Major: Product Development and Visual Merchandising concentrations; International Relations Major; Organizational Leadership Major; Political Science Major; Psychology Major; or Public and Nonprofit Administration Major)
- Bachelor of Science in Business Administration: General Business Administration and Information Systems concentrations
- Bachelor of Science in Education (B.S. in Ed.) degree, Standard Certificate (Early Childhood and Elementary Education): Teaching Early Childhood B-K & Early Childhood Special Education and Standard Certificate (Early Childhood and Elementary Education): Teaching Grades PK-6. Please contact an advisor.
- Bachelor of Science in Nursing

Undergraduate Certificates include: Cybersecurity, Entrepreneurial Studies, Deafblind Intervener, Citizen Engagement, Lawmaking and Legal Processes, Political Advocacy and Elections

## Military and Veterans Services

CMU has been a leader and innovator in bringing quality programs to our military men and women since 1972. All of our programs, whether onsite or online, are career-focused plans to a more secure future in the military, or in civilian life after service. CMU has been a long-standing partner in military education and supports the concept of the "Life Long Learner." CMU has been a partner in military education for over 50 years and has been continually recognized as a Gold Level Veteran-Friendly School by the Michigan Veterans Affairs Agency (MVAA) and as a Military Times Best for Vets College.

### Veterans' Resource Center

The Veterans' Resource Center (VRC) serves all students who are veterans, spouses, dependents or military students. VRC staff will help these students get the most out of their CMU experience, build academic and social networks, and receive assistance with their educational benefits, including those applicable to spouses and dependents. Hours of operation are Monday through Friday, 8 a.m.-5 p.m. or by appointment. Hours of operation are Monday through Friday, 8 a.m.-5 p.m. or by appointment. The Veterans' Resource Center is located in Bovee University Center 110 and may be reached at 989-774-7991 or [veterans@cmich.edu](mailto:veterans@cmich.edu).

Specific information regarding Veterans' Certification can be found at: <https://www.cmich.edu/offices-departments/veterans-resource-center>.

### Military Service Commission

A commission in the United States Army may be obtained while enrolled in undergraduate or graduate school. Interested individuals should contact the chairperson of the Military Science Department, telephone 989-774-3049.

### Application Fee

All U.S. military veterans, active duty, National Guard, and reserve service members are eligible to have their application fee to CMU waived. To receive the waiver, the individual must provide one of the following to CMU at the time of application:

- DD-214 form verifying service,
- Service verification letter from their command indicating current duty station,
- VA Certificate of Eligibility (CoE), or
- Active military ID if you are applying in person at a CMU center.

### Resident Tuition

Unless otherwise qualified for the military discounted tuition rates, the following individuals shall be charged the in-state tuition:

Any individual using educational assistance under either Chapter 30 (Montgomery GI Bill® – Active Duty Program), Chapter 31 (Veteran Readiness & Employment), Chapter 33 (Post-9/11 GI Bill®) (to include the Marine Gunnery Sergeant John David Fry Scholarship [38 U.S.C. § 3311 (b) (9) or 3319], of title 38, United States Code), Chapter 35 (Dependents Education Assistance Program), and Chapter 1606 (Montgomery GI Bill® - Selected Reserve).

Please see [https://www.benefits.va.gov/gibill/post911\\_resident\\_requirements.asp](https://www.benefits.va.gov/gibill/post911_resident_requirements.asp) for additional information on GI Bill® resident rate requirements.

Covered Individuals (includes Veterans, current military personnel, and family members), eligible for VA education entitlement must provide a copy of the VA Certificate of Eligibility (COE) letter verifying approval of VA educational entitlement.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at [www.benefits.va.gov/gibill](http://www.benefits.va.gov/gibill).

### Military Discounted Tuition Rates

Listed below are the 22-23 base Military tuition rates per credit hour for which academic credit is awarded. The President or designee may vary these tuition rates and fees according to cohorts, programs, locations, or terms of contracts.

Undergraduate, Military	299.00
Graduate, Military	399.00
Master of Business Administration, Master of Science in Information Systems, and Master of Entrepreneurial Ventures - Online Military Rate	745.00
Doctor of Health Administration Military Rate	800.00

#### Notes:

Military Rates are applicable to programs that do not exceed the standard undergraduate and graduate rates. However, the graduate military rate is also applicable to the Master of Science in Nutrition and Dietetics and Specialist in Education programs.

#### Qualifying Categories for Military Discounted Tuition Rate

Active duty members, reservists or National Guard members currently serving in a branch of the United States military, which includes the U.S. Air Force, Army, Navy, Marine Corps, Coast Guard, and Space Force or the spouse or dependent child(ren) of military members. Eligibility for family members includes (a) those that qualify under the existing IRS definition of a qualifying dependent and/or (b) possess a current military benefits identification card (excludes military retirees).

Individuals must submit documentation verifying their eligibility for the Military discounted tuition rate. If not already on file with Central Michigan University, acceptable means of verification include:

1. Present your active duty or active duty dependent military ID to your nearest CMU education center.
2. Alternatively, active military members including eligible family members, reservists or guard members may submit a verification letter from the military members command reflecting their status as well as their end of service date.

#### CMU Student Services Fee

See Fees in the index for the Student Services Fee.

#### Registration Information

Central Michigan University offers the earliest registration appointment times to all active military personnel, certified veterans and those deemed eligible for VA benefits by the Dept. Veteran Affairs. Central Michigan University also reserves the right to permit other approved student populations earlier registration appointment times as designated. Military Veterans will receive earliest Priority Date based on their official course registration date and class availability.

Servicemembers are encouraged to speak with their Educational Services Officer (ESO) or military service counselor regarding the approval of tuition assistance benefits prior to enrolling in courses.



## Veteran Award

Consideration for the Central Michigan University Veteran Award is available to honorably discharged veterans from the U.S. Military Service who have regular admission as an undergraduate or graduate in one of CMU's on-campus or online standard degree programs.

### Applicant Requirements:

- Complete the Veteran Award Application: <https://www.cmich.edu/offices-departments/veterans-resource-center/prospective-students/affording-your-cmu-education/scholarships-for-military-affiliated-students/veteran-award>.
- Provide a copy of your DD-214 member-4 copy verifying honorable discharge or, documentation from the U.S. Department of Veteran's Affairs indicating eligibility for educational benefits. Do not email documents.
- File the Free Application for Federal Student Aid (FAFSA).
- Undergraduates must be enrolled in a minimum of 9 credit hours per semester.
- Graduates must be enrolled in a minimum of 6 credit hours per semester.

### Due Dates for Fall and Spring semesters

- November 1 for Fall only enrollment.
- March 1 for Fall and Spring enrollment.
- The Summer Veteran Award Application will be available each year in March.

### Awarding Criteria

The CMU Veteran Award is a need-based award for eligible veterans admitted to CMU after August 16, 2016. Current students who are already receiving a special rate are not eligible for this award. Eligibility is based on the students Expected Family Contribution (EFC) from the current Free Application for Federal Student Aid (FAFSA). Applications will not be considered if the FAFSA is not on file with CMU's Financial Aid Office. The amount of an award will vary dependent on student EFC and grade level. Students must maintain enrollment requirements each semester to retain the award:

- For an undergraduate, this is 9 credit hours per semester.
- For a graduate, this is 6 credit hours per semester.
- Enrollment will be verified at the time of awarding.

Awards made for two semesters are subject to adjustment based on changes in credit hours enrolled. Dropping without tuition charges, after the award is credited to the student account, will result in the reversal of the award for the semester. This may result in a bill back to your student account. Withdrawal from classes during the semester will result in the loss of eligibility for the Veteran Award in the subsequent semester. Students must meet the Satisfactory Academic Progress (SAP) standards for Federal Student Financial Aid regardless of whether or not financial aid is being used.

## Veterans' Educational Benefits

A student who is a veteran, a member of the armed forces, or spouse or dependent of a veteran or current service member may be entitled to educational benefits through the United States Department of Veterans Affairs (VA). Eligibility for such benefits is determined by VA.

VA strictly enforces policies governing enrollment certification and payment of veterans' educational benefits. Students receiving VA educational benefits need to be aware of the following information that will affect receipt of benefits while enrolled at Central Michigan University.

Central Michigan University will not impose penalties upon any student using Chapter 31 or Chapter 33 VA education benefits who is unable to meet their financial obligations to the university, due to delayed disbursement from the VA.

To prevent imposing penalties upon students using GI Bill® benefits, all students utilizing those benefits will be required to submit an Enrollment Certification Request (ECR) form (<https://globalapp.cmich.edu/ECR/#/>) and upload the Certificate of Eligibility (CoE) they received from the VA, prior to the billing due date for that semester. Students

with Post 9/11 GI Bill® eligibility of less than 100% will be required to pay the difference between their financial obligation, and the amount expected from the VA, prior to the established due date, unless other arrangements are made by mutual agreement with the university.

Those students who are using Chapter 33 Post 9/11 GI Bill® eligibility that has been transferred to them from a sponsor, are responsible for ensuring they understand how much of their entitlement remains at the beginning of the semester. Residual financial obligation resulting from the expiration of VA entitlement is the sole responsibility of the student.

**Audit Grades.** Enrollment certification is prohibited for audited courses.

**Eligible Courses.** Only courses that count toward completion of a student's stated educational objectives may be certified with VA. To ensure compliance with this VA regulation:

- Main Campus undergraduate students must officially declare a major upon earning 56 credit hours, or before.
- CMU Online undergraduate students must consult with their academic advisor upon admission to CMU and develop an appropriate degree plan.
- All graduate students consult with their academic advisor upon admission to CMU and develop an appropriate degree plan.

**Note:** Students changing or adding a degree or certificate program as a dual objective must execute a new degree plan. As part of the new degree plan (change) process, students utilizing VA educational benefits must have their completed coursework re-evaluated by the student's advisor to ensure previously completed courses are appropriately included in the student's revised degree plan. Students are also advised that any change in degree or certificate program requires the student to submit a formal application.

**Enrollment Certification Request.** Students approved for GI Bill® Educational Benefits and wishing to receive those benefits at CMU must submit a Central Michigan University GI Bill® Enrollment Certification Request (ECR) form EACH SEMESTER. For the student's convenience, this form is online at <https://globalapp.cmich.edu/ECR/#/>.

**Enrollment Changes.** Students must promptly notify their School Certifying Official of any schedule changes (i.e., dropping, adding, or withdrawing from a course).

**Incomplete (I) and Deferred (Z) Grades.** An incomplete or deferred is considered non-punitive and must be converted to a punitive grade within one year. VA will be notified at the end of the term of non-punitive grades; repayment of benefits may be required.

**Prior Learning Credit.** VA will not reimburse students for the cost of prior learning assessment credit.

**Rate of Pursuit.** Below is the university rate of pursuit enrollment status standard for undergraduate and graduate non-standard courses\*. Federal Student Aid (FSA) has a different enrollment status standard for determining aid eligibility.

#### *Undergraduate Rate of Pursuit (5-week courses)*

- 4 or more credits=full time
- 3 credits=three-quarter time
- 2 credits=half time

#### *Undergraduate Rate of Pursuit (8-week courses)*

- 6 or more credits=full time
- 4-5 credits= three-quarter time
- 3 credits=half time

#### *Undergraduate Rate of Pursuit (12-week courses)*

- 8 or more credits=full time
- 6-7 credits=three-quarter time
- 4-5 credits= half time

(continued)

*Undergraduate Rate of Pursuit (15 or 16-week courses)*

- 12 or more credits=full time
- 9-11 credits=three-quarter time
- 6-8 credits=half time

*Graduate Rate of Pursuit (1 or 2-day courses)*

- 1 or more credits=full time

*Graduate Rate of Pursuit (1 or 2-week courses)*

- 1 or more credits=full time

*Graduate Rate of Pursuit (3-week courses)*

- 2 or more credits=full time
- 1 credit=half time

*Graduate Rate of Pursuit (5 or 6-week courses)*

- 3 or more credits= full time
- 2 credits=half time

*Graduate Rate of Pursuit (7 or 8-week courses)*

- 3 or more credits= full time
- 2 credits= half time

*Graduate Rate of Pursuit (9 week-courses)*

- 5 or more credits= full time
- 3-4 credits=half time

*Graduate Rate of Pursuit (12-week courses)*

- 6 or more credits= full time
- 3-5 credits=half time

*Graduate Rate of Pursuit (15 or 16-week courses)*

- 9 or more credits=full time
- 6-8 credits=three-quarter time
- 5 credits=half time

\*For the rate of pursuit of course lengths not listed, please contact the Registrar's Office.

**Repeat Courses.** Only courses that are failed or for which the grade does not meet minimum requirements for graduation may be certified with VA if they are repeated.

**Satisfactory Academic Progress.** Students must maintain satisfactory progress according to published standards established and enforced by the University. Federal regulations mandate that benefits be discontinued when satisfactory progress has ceased. Accordingly, CMU must discontinue certification of enrollment and inform VA. Students have a right to appeal the termination of benefits with VA. For additional information, see the *Satisfactory Academic Progress* in the Financial Aid Section of the Bulletin.

**Transfer Credit.** Students must provide CMU with an official transcript from all previous institutions attended. If this requirement is not met during the student's first term of enrollment, CMU will not certify enrollment for any future terms. The student will receive a Transfer Credit Evaluation showing all previous credits approved for transfer to CMU.

To be considered for transfer credit students must provide an official Joint Service Transcript (JST) with the American Council on Education (ACE) Recommendation. CMU follows the ACE Recommendations as it relates to military experiences and training; to be considered for transfer, students should provide official transcripts or official documentation that includes an ACE Recommendation.

## Federal Financial Aid for the Military Community

Federal Financial Aid and other educational assistance programs are available to service members, veterans, and other eligible family members to help cover the cost of tuition. The following is an overview of Title IV Federal Student Aid and benefit programs through the Departments of Veterans Affairs and Defense.

### Title IV Federal Student Aid

*What is the maximum amount of Federal grant and loan aid available to students under Title IV of the Higher Education Act of 1965 (Title IV)?*

The Federal government offers a variety of grants and loans to students. The Federal Student Aid Gateway (<https://studentaid.gov/>) provides detailed information about Title IV Federal Financial Aid programs and loans and how you can apply for these programs.

Grants and Scholarships are often referred to as "gift aid" because these programs provide students with financial aid that does not have to be repaid. Federal Grants and Scholarships (<https://studentaid.gov/understand-aid/types/grants/pell>) including Federal Pell Grant, Teach Grant, Federal Supplemental Educational Opportunity Grants & the Iraq and Afghanistan Service Grants.

The Federal Direct Student Loan Program (<https://studentaid.gov/understand-aid/types/loans>) provides students with subsidized and unsubsidized loans (<https://studentaid.gov/understand-aid/types/loans>) based on a student's year in college as either a dependent or independent undergraduate or at the graduate degree level.

The amount (<https://studentaid.gov/understand-aid/types/loans>) a student can borrow is determined by their grade level and prior student loan borrowing.

In addition to subsidized and unsubsidized loans some students may qualify for a Federal Direct PLUS loan (<https://studentaid.gov/plus-app/>) based on the cost of attendance (<https://studentaid.gov/h/apply-for-aid/fafsa>).

*How can you qualify for loans and other Title IV assistance?*

The Free Application for Federal Student Aid or FAFSA (<https://studentaid.gov/h/apply-for-aid/fafsa>) is required for the school to determine your eligibility for Title IV financial aid. Undergraduate dependency (<https://studentaid.gov/apply-for-aid/fafsa/filling-out/dependency>) status for federal aid is determined by the questions on the FAFSA.

Title IV eligibility is automatically packaged by CMU, usually within 10 business days of receiving the FAFSA as long as there are no flags on student data. Once a student receives their award notification, they have the option of declining all or part of the loan. Student may either use the Federal Student Loan Adjustment Form found on the Financial Aid Forms page <https://www.cmich.edu/offices-departments/office-scholarships-financial-aid/forms> or contact the Office of Scholarships and Financial Aid via email at [FinancialAid@cmich.edu](mailto:FinancialAid@cmich.edu)

*Why may Title IV student loans be more favorable than private educational loans?*

"Student loans can come from the federal government or from private sources such as a bank or financial institution. Loans made by the federal government, called federal student loans, usually offer borrowers lower interest rates and have more flexible repayment options than loans from banks or other private sources." See <https://www.cmich.edu/offices-departments/office-scholarships-financial-aid/loans> to compare the terms and conditions of federal student loans and private lender loans.

### CMU Withdrawal Information and Satisfactory Academic Progress

Refer to the CMU Withdrawal page for Return of Title IV Financial Aid Refund and Satisfactory Academic Progress Policy information:

<https://www.cmich.edu/offices-departments/finance-administrative-services/financial-services-reporting/student-account-services-university-billing/withdrawal-information>

Also refer to *Military Drop/Withdrawal Refund Policy* for exceptions.

### Additional Information on Title IV Federal Financial Aid

Contact the Office of Scholarships and Financial Aid (OSFA) via email at [FinancialAid@cmich.edu](mailto:FinancialAid@cmich.edu) or by phone at 989-774-3674.

A number of tools are available to assist you in understanding and evaluating your options as a student:

- **College Navigator** - <http://nces.ed.gov/collegenavigator/>
- **CMU Net Price Calculator** - <https://cmich.studentaidcalculator.com/survey.aspx>
- **College Scorecard** - <https://collegescorecard.ed.gov/>
- **GI Bill® Comparison Tool** - <https://www.va.gov/gi-bill-comparison-tool/>
- **Estimate Your Federal Student Aid** - <https://studentaid.gov/aid-estimator/>
- **Paying for College** - <https://studentaid.gov/h/understand-aid>

Upon admission to CMU the Financial Aid Shopping Sheet is also available to students through Central Link.

### Departments of Veterans Affairs and Defense

*What types of education benefit programs are offered by the Departments of Veterans Affairs and Defense?*

If you are currently serving in the military, you may be eligible for funding offered through the Department of Defense Tuition Assistance program (<http://www.benefits.va.gov/gibill/>).

- Check your eligibility status and the amount for which you qualify with your service prior to enrolling.
- If you served on active duty, you might be eligible for education benefits offered by the Department of Veterans Affairs. For example, the Post-9/11 GI Bill® ([http://www.benefits.va.gov/gibill/post911\\_gibill.asp](http://www.benefits.va.gov/gibill/post911_gibill.asp)) provides financial support for educational and housing expenses to individuals with at least 90 days of aggregate service after September 10, 2001, or individuals discharged with a service-connected disability after 30 days.
- You must have received an honorable discharge to be eligible for the Post-9/11 GI Bill®.
- If you are the spouse or child of a service member who is serving on active duty Title 10 orders in the paygrades of E1-E5, O1-O2, or W1-W2, you may be eligible for financial assistance from the Department of Defense for education, training, and/or the occupational license and credentials necessary for a portable career.
- If you are the spouse or child of a service member, you may be eligible for transfer of the service member's Post-9/11 GI Bill® benefits to you.

### Additional Information on Military Educational Benefits

- CMU Programs for the Military Community (<https://www.cmich.edu/admissions-aid/military-veteran-students/additional-resources>)
- CMU Veterans' Resource Center (<https://www.cmich.edu/offices-departments/veterans-resource-center>)

## Transfer Credit for Military Training and Experience

- Military service school experiences.** Granting of academic credit for military service school experiences will be guided by the evaluations prepared by the American Council on Education and published in the "Guide to the Evaluation of Educational Experiences in the Armed Services." All Military Service School experiences that are recommended for undergraduate level credit will transfer to Central Michigan University. Acceptability of credit for military service school experiences to fulfill CMU major or minor requirements is at the discretion of the individual department.
- Military occupational specialties.** Granting of academic credit for military occupational specialties will be guided by the evaluations prepared by the American Council on Education and published in the "Guide to the Evaluation of Educational Experiences in the Armed Services." All Military Occupational Specialties that are recommended and for undergraduate level credit and are germane to CMU will transfer to Central Michigan University. Acceptability of credit for military occupational specialties to fulfill CMU major or minor requirements is at the discretion of the individual department. To be considered for transfer credit student must provide an official Joint Service Transcript (JST) with the American Council of Education (ACE) Recommendation. CMU follows the ACE Recommendations as it relates to military experience and training; to be considered for transfer, students should provide official transcripts or official documentation that includes an ACE Recommendation.

## Army Tuition Assistance

The Army portal is exclusively the reference point for all enrollment, withdrawal and drop transactions in terms of Army tuition assistance.

### Refund

Up to 12.5% of Course Completion	100%
12.501% to 25% of Course Completion	75%
25.001% to 50% of Course Completion	50%
50.001% and thereafter	0%

## Re-Admissions

Military Service members whose enrollment is interrupted or precluded due to military service requirements will be promptly readmitted with the same academic status as he/she had when last attending and/or admitted to CMU.

- *Notification of military service.* The student (or an appropriate officer of the armed forces or official of the Department of Defense) must give oral or written notice of such service to the school as far in advance as is reasonable under the circumstances.
- *Notification of intent to return to school.* The student must also give oral or written notice of her intent to return to the school within three years after the completion of the period of service.

The cumulative length of the absence and of all previous absences from the school for military service may not exceed five years. Only the time the student spends actually performing service is counted.

To be readmitted to CMU, students should submit an updated application; an application fee is not charged and any official transcripts previously submitted do not need to be resubmitted. Once readmitted and prior to registering, students should work with their Academic Advisor to update their degree plan; this is to ensure they are registering for the correct courses.

## Withdrawal To Enter Military Service

See the Index for the page number.

### Military Drop/Withdrawal Refund Policy

Students who currently serve in the active duty military, guard units, the military reserve, and/or family members whose educational pursuits are interrupted by military orders or unforeseen military obligations must submit documentation verifying their eligibility for the military refund exception. If not already on file with Central Michigan University, acceptable means of verification include:

Present your active or dependent military identification to your nearest CMU education center along with a copy of official military orders indicating the specific time period and nature of the military service obligation; or alternatively,

Active military members including eligible family members, reservists or guard members may submit a verification letter from the military member's command reflecting their status of their military obligation and service dates.

Additional exceptions to the course refund policy shall be considered for military members whose military duties or responsibilities impair or prevent their ability to participate in class and complete the course requirements. Where possible, **exceptions must be requested prior to the last class session.** A copy of TDY orders or other appropriate confirmation of the assignment that precluded completion of the course must accompany the withdrawal exception request.

Military Tuition Assistance (TA) is awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of TA funds originally awarded. To comply with the Department of Defense policy, Central Michigan University will return any unearned TA funds on a prorated basis through at least the 60% portion of the period for which the funds were provided. TA funds are earned proportionally during an enrollment period, with unearned funds returned based upon when a student stops attending.

### Student Short-Term Military Service Policy

**Policy.** Central Michigan University recognizes that those students who are actively serving in the Reserves or National Guard are required by their military contract to attend to military orders requiring mandatory training or serve at the request of the Governor of their state to respond to natural disasters or other occurrences in which the use of the National Guard is in the best interest of the state. Failure to attend these orders is punishable under law. The University therefore provides the following rights to students required by their military contract to respond to military orders through the Student Short-Term Military Service Policy.

**Procedure.** Central Michigan University will not penalize students for complying with mandatory military orders and will give the opportunity to earn equivalent credit and to demonstrate evidence of meeting the learning outcomes for missed assignments or assessments in the event of a schedule or class conflict due to mandatory military orders. It is the responsibility of the student to inform the instructor at the earliest possible time of the existing schedule or class conflict.

Students are eligible for up to fifteen (15) days of short-term, military required absence per academic year with no more than ten (10) academic calendar days taken consecutively. Total absences, including travel, may not exceed 1/3 of the course meetings for any course.

Students may be granted additional absences to account for travel considerations, to be determined by the distance of the verified military service from the CMU campus where the student is registered, as follows: Within a 150 mile radius of campus or center: no additional excused absence days; Between a 150 - 300 mile radius of campus or center: one additional excused absence day; Beyond a 300 mile radius of the campus or center: two additional excused absence days; Outside the continental United States: four additional excused absence days.

A student must contact the office of the Associate Vice President for Student Affairs to request that a notice of the leave be sent to instructors as soon as the student is informed of the dates of military service. The student must provide documentation of the mandatory military service in the form of orders or equivalent documents as proof of legitimate absence to the office of the AVP for Student Affairs as soon as these documents are available. When documentation is presented to the office of the AVP for Student Affairs a verified absence notification will be sent to the student's instructors.

With a verified absence notification for the office of the AVP for Student Affairs, instructors will not penalize the student for missing class and will provide the opportunity to earn equivalent credit and to demonstrate evidence of meeting the learning outcomes for missed assignments or assessments or will negotiate with the student for additional time to complete assignments or alternative dates for required assessments.

Should a student not be satisfied with the agreed upon plan, the student shall provide, within 10 days, a written statement to the instructor clearly explaining their objection and suggesting an alternative accommodation. If the instructor and student cannot expediently resolve this written objection, then the student may appeal for further review or consultation of their case to the Department Chair of the course or courses in question. In a case where grades are negatively affected, the student may follow the established grade appeals process.

In courses with extensive laboratory exercises, group projects, group performances, or participation requirements, equivalent exercises or assessments may not be possible as determined by the instructor and subject to review by the Dean of the college offering the course, or their designee. In such a case, the student may be eligible for retroactive withdrawal. The student should always consult with the instructor to determine the potential impact of any absence. Students should also contact Central Michigan University's Office of Scholarships and Financial Aid and the Veterans' Resource Center to determine if retroactive withdrawal has any impact on financial aid awards or Veteran Administration education benefits.

For a full copy of this policy (including procedures for faculty and information on available counseling), see *Policy 7-12* on the General Counsel website, <https://www.cmich.edu/offices-departments/general-counsel>.

### Release of Information

The University will only release non-directory information regarding the education progress of military members or other covered individuals utilizing Veterans Education Benefits/military tuition assistance upon proper authorization by the student. For additional information, refer to the Family Educational Rights and Privacy Act section of the Bulletin.

### Endowed Scholarships and Awards

See the Scholarships and Financial Aid section for awards and scholarships specifically for students in the military.

### Curriculum and Course Changes

See the Index for more information.

### CMU Online Courses

Those students applying veterans educational benefits toward tuition of a course should contact CMU's Veterans' Resource Center for information regarding certification and restrictions.

### CMU Department of Military Science and ROTC

See the Index for information.



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## Diversity, Equity & Inclusion

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### Office of Institutional Diversity, Equity & Inclusion

**Shawna Patterson-Stephens**, Vice President/Chief Diversity Officer  
Warriner 319; 989-774-3700

The Office of Institutional Diversity, Equity & Inclusion serves a leading role in promoting an institutional culture that values and supports diversity and inclusion. Historical legacies on inclusion and exclusion have determined pathways to education that have served to be closed to many potential students, staff, and faculty. Diversity, equity and inclusion within the academic and educational setting reflects a community that is reflective of all aspects of society, so that all community members can share in our differences and our similarities a part of our life-long learning process. We prepare our students through leadership development the skills necessary for impacting an increasingly more global society that preserves knowledge from all communities that is inherent to prepare graduates for a more complex and diverse society.

The Office of Institutional Diversity, Equity & Inclusion offers opportunities for faculty, staff and students to enhance their cultural competence by providing intercultural education, facilitating campus wide interaction, building collaborative partnerships to advance diversity and inclusion, and implementing educational opportunities that cultivate and sustain a supportive and inclusive campus community.

### Center for Student Inclusion and Diversity

Bovee University Center 108; 989-774-3711; email: [cid108@cmich.edu](mailto:cid108@cmich.edu)

Opening its doors in 2011, The Center for Student Inclusion and Diversity (CSID) houses several offices, programs and resources to support students' academic, social and cultural education. Those offices include Multicultural Academic Student Services, Office of Indigenous Programs, LGBTQ Services and Gender Equity Programs, and Student Transition Enrichment Program (STEP).

The CSID provides a safe space that nurtures learning and the achievement of personal and educational goals through cultural enrichment, peer tutoring, mentoring, and leadership activities on campus. The CSID allows students a place to study and do homework, meet, hang out/relax, and access wireless internet.

The programs and services of the Center for Student Inclusion and Diversity foster academic achievement, leadership development, and advancement of all students at Central Michigan University. The CSID includes a conference room and a space for exhibits and receptions.

### Multicultural Academic Student Services

The Office of Multicultural Academic Student Services (MASS) provides assistance to students with academic, personal, social concerns and cultural support. To empower and retain students, the staff provides and enhances a campus environment where diversity is understood and celebrated. The office coordinates student activities and retention services and serves as a representative voice for CMU's students of color. The office works closely with diverse student groups in planning and implementing academic, social, and recreational activities. Programs and scholarships offered through the office include cultural celebrations, the Multicultural Award of Distinction, Lloyd M. Cofer and Multicultural Advancement scholarships. The office also offers mentoring through the Men About Change program along with the Women's Initiative of Strength and Hope (WISH) program. Additional objectives include establishing strong working relationships with existing university offices and departments on matters regarding educational policies and procedures, developmental program planning and evaluation, and student services relating to minorities. Contact information: Bovee University Center 112; 989-774-3945; e-mail: [mass@cmich.edu](mailto:mass@cmich.edu).

### Office of Indigenous Affairs

The cultural and social programs offered by the Office of Indigenous Affairs (OIA) allows the campus and local community to come together to learn about Indigenous culture and history. The office serves several purposes. OIA attracts Indigenous students to CMU and helps them achieve their educational goals; builds student leaders through committee work and internship programs; serves as a liaison to Michigan's tribal communities to determine their educational needs; and sponsors programs that provide opportunities for everyone to experience Indigenous cultures through activities, workshops, and events. Contact Information: Bovee University Center 110C; 989-774-2508; e-mail: [Indigenous@cmich.edu](mailto:Indigenous@cmich.edu).

### The Office of Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) Services

The purpose of the Office of Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) Services is to coordinate programs, to participate in educational forums to raise awareness of LGBTQ concerns, and to meet the needs of CMU's LGBTQ community. Programs address issues of heterosexism, homophobia, transphobia, coming out and other issues related to the experience of sexual orientation and gender identity/gender expression. The office also keeps a resource file of educational, social, and political articles and brochures of interest to LGBTQ individuals and the university community. Contact information: Bovee University Center 125; 989-774-3637.

### Student Transition Enrichment Program (STEP)

The Student Transition Enrichment Program (STEP), a MiCUP (Michigan College University Partnership) grant funded by the King-Chavez-Parks Initiative Workforce Development Agency, provides support services for first-generation and/or Pell Grant-eligible students who transfer into Central Michigan University. Programs and events include: Academic Advising, CMU Campus Visits, and Academic Workshops. The goal of STEP is to promote knowledge of the transfer process, academic programs and resources at CMU; build relationships; and develop academic, self-confidence, and career planning skills. Contact information: Bovee University Center 110C; 989-774-2508; e-mail: [mocup-step@cmich.edu](mailto:mocup-step@cmich.edu).

## Office of Global Engagement

### Jennifer Evanuiik, Executive Director

Ronan Hall 330; 989-774-4308;

[www.oge.cmich.edu](http://www.oge.cmich.edu)

### Mission

The Office of Global Engagement's mission is to foster intercultural understanding and global perspectives among the Central Michigan University community. We believe that all members of our community should have opportunities to engage with other cultures, develop new perspectives, and learn how to lead in a global society. Through partnerships across campus and around the world, we support study abroad programs, curricular and co-curricular global initiatives, and we welcome international students, scholars, faculty and staff to our campus. Through our work, we contribute to CMU's mission to "prepare students for productive careers, meaningful lives and responsible citizenship in a global society."

The Office of Global Engagement (OGE) provides centralized support for CMU's international initiatives. OGE is comprised of two main work groups: Study Abroad and International Student and Scholar Services. In addition, OGE supports CMU's broader internationalization efforts.

In support of campus internationalization, OGE:

- reviews, evaluates, and assists in the creation of international agreements and partnerships;
- maintains data on CMU's international activities;
- disseminates information about global opportunities for faculty and staff;
- collaborates with campus and community partners to offer programming to support cross-cultural understanding.

### International Student and Scholar Services:

- provides comprehensive initial orientation and ongoing support services to international students, scholars, and faculty for a smooth transition and a successful academic experience at CMU;
- serves as social and academic advocates on behalf of the international student and scholar population;
- assists international students, scholars and faculty in understanding immigration regulations and maintaining valid legal status in the United States;
- ensures university compliance with Department of Homeland Security and Department of State regulations for international students and scholars and is the Program Sponsor for CMU's Exchange Visitor Program.

### Study Abroad:

- offers over 150 approved study abroad programs in more than 50 countries--see <https://cmich.studioabroad.com/index.cfm?FuseAction=Programs.AdvancedSearch> for more information;
- ensures a wide range of short-term, semester and year-long study, internship, and/or service abroad opportunities in almost every major;
- offers opportunities to study world languages;
- offers virtual international internships;
- works closely with students and academic departments to ensure study abroad programs contribute to academic progress and on-time graduation.

Knowledge of a world language is not a requirement to study abroad because there are many programs around the world that offer courses taught in English. The office's experienced study abroad advisors meet with students to help them choose an appropriate program to match their budget and academic interests. All students participating in a CMU approved program will receive academic credit for courses completed. Students can request that all of their courses be pre-approved by the academic department, so they will know, in advance, the course credits to be awarded by CMU. Students must be in good standing at CMU to apply; information about academic standing can be found in the University Bulletin. Some programs specify that a minimum GPA is required and this information can be found on the program brochure page on our website.

Studying abroad does not have to be expensive. Students looking for affordable programs can choose from a variety of tuition exchange and low-cost programs offered around the world through CMU partners and affiliates. There are also a number of resources available to help fund study abroad (see <https://www.cmich.edu/academics/study-abroad/funding>). The Office of Global Engagement offers a large number of study abroad scholarships each year. In addition, there are scholarships available through CMU colleges and academic departments as well as from external sources to help students fund their international study. Students participating in a CMU-approved study abroad program may also continue to receive financial aid and may apply for additional funds to cover the study abroad program costs.

## University Services and Resources

### Division of Student Affairs

#### Reneé Watson, Vice President for Student Affairs

Ronan Hall 220; 989-774-3346;

<https://www.cmich.edu/offices-departments/division-of-student-affairs>

Student Affairs provides coordination of student service programs and serves as an advocate for students and their concerns. The student services staff promotes a campus atmosphere that fosters intellectual and personal growth of students. Student Affairs encourages students to communicate their needs and interests to enhance the quality of programs, services, and student life. Students may contact the Student Affairs for assistance with courtesy notifications to instructors regarding extended absence from campus due to illness or other personal issues.

Student Affairs coordinates student development experiences and co-curricular activities for students, as well as enhances the interaction, cooperation, and collaboration of student service units with the academic deans and departments. The division enables the university to focus on fostering students' intellectual, professional, and social development.

### Student Activities and Involvement

Students connect with many aspects of university life through Student Activities and Involvement. Students may contact Student Activities and Involvement for assistance with policies and procedures, such as the weekly STUDENTNEWS e-mail distribution

**Student Activities and Organizations.** CMU provides students with opportunities to become involved in more than 400 student organizations. Activities outside the classroom are an integral part of the total development process, and students are encouraged to take part in activities of interest to them. A wide range of interests can be pursued through organizations that focus on social issues, student governance, pre-professional development, entertainment, community service, hobbies, club sports, or religion. Involvement in student organizations is an excellent way to develop leadership skills. Many academic departments sponsor student organizations and honor societies.

**Student Government Association (SGA).** SGA is recognized as the representative governing body for CMU students. By becoming active in SGA, any student may participate in the formation of policies, procedures, and programs which affect their education. The major function of the Student Government Association is to represent the interests and needs of all students, including new ideas or concerns of the university community. People who have an interest in working with an issue that relates to the student body or are interested in serving on university committees may contact SGA for information. SGA elections are held every year to select officers and representatives, however, any student may participate in committees without being an elected member.

**Student Organization Center (SOC),** located on the lower level of the Bovee University Center, acts as a gathering place for student organizations on campus. Here you will find offices for Program Board (PB), Student Government Association (SGA), Residence Hall Assembly (RHA), and Alternate Breaks (AB).

Students interested in participating in campus activities should contact Student Activities and Involvement. See <https://www.cmich.edu/student-life/clubs-and-recreation/student-activities-involvement> for more information.

**Program Board.** Program Board is a student committee which reports to Student Activities and Involvement. It is a learning experience for students interested in all aspects of the entertainment field, such as

contract negotiations, marketing, promotions, graphic design, and special events. Program Board plans, schedules, and conducts social and educational events that occur outside of the classroom, and complement the academic curriculum. Programming includes performing artists and speakers, as well as major concerts and films. Students have the opportunity to participate in selecting which performers come to campus, and to learn how to effectively plan and co-sponsor events with other campus organizations.

### Student Conduct

The Office of Student Conduct upholds the *Code of Student Rights, Responsibilities and Disciplinary Procedures* (the Code). The Office of Student Conduct is committed to ensuring students due process through a fair and just educational experience. Located in Ronan Hall, you may contact the Office of Student Conduct to ask questions, file a disciplinary report, or to make an appointment with a Conduct Proceedings Officer. Contact 989-774-1345 or [StudentConduct@cmich.edu](mailto:StudentConduct@cmich.edu).

**University Policy for Student Conduct.** The university's philosophy of a student's relationship to CMU is expressed in the Code of Student Rights, Responsibilities, and Disciplinary Procedures (see Appendix I).

**Sexual Aggression Services.** The Sexual Aggression Services Director, through Student Affairs, coordinates services and educational programs on campus relating to sexual assault, stalking, and dating violence. The university encourages a proactive approach to this problem through educational programs and counseling to both men and women. Concerns and reports of sexual aggression should be made to the Office of Student Conduct, the CMU Police Department, the Office of Civil Rights and Institutional Equity Title IX Coordinator, a counselor in the Counseling Center, or SAPA (Sexual Aggression Peer Advocates). For more information, see <https://www.cmich.edu/offices-departments/sexual-aggression-peer-advocates>.

### Office of Civil Rights & Institutional Equity

CMU is an affirmative action/equal employment (AA/EO) institution, providing equal opportunity to all persons, including minorities, females, veterans and individuals with disabilities. CMU strongly and actively strives to increase diversity and provide equal opportunity within its community. CMU encourages diversity and provides equal opportunity in education, employment, all of its programs, and the use of its facilities. CMU is committed to protecting the constitutional and statutory civil rights of persons connected with the university.

The Office of Civil Rights and Institutional Equity coordinates and monitors CMU's AA/EO efforts and programs to assure compliance with federal and state laws and statutes, including but not limited to the Americans with Disabilities Act, Titles VI and VII of the 1964 Civil Rights Act, Title IX of the Education Amendments of 1972, Executive Order 11246, Section 504 of the Rehabilitation Act of 1973, the Violence Against Women Reauthorization Act of 2013, the Elliott-Larson Civil Rights Act. The Office of Civil Rights and Institutional Equity also supervises the maintenance of related reports and records, provides and develops related educational programs and materials, offers guidance and advice to all community members on the university's nondiscrimination and affirmative action policies and procedures, and assists departments with recruitment and retention activities. For more information, contact the Office of Civil Rights and Institutional Equity, Bovee UC 306, Central Michigan University, Mt. Pleasant, MI 48859, 989-774-3253, (fax: 989-774-2022); [cmich.edu/ocrie](http://cmich.edu/ocrie).

CMU does not discriminate on the basis of sex in the education program or activity that it operates, including admission and employment, and is required by Title IX of the Education Amendments of 1972 not to discriminate in such a matter.

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Inquiries about the application of Title IX can be made to CMU's Title IX Coordinator, the US Department of Education's Assistant Secretary, or both.

CMU's Title IX Coordinator can be reached at: **Office:** 103 E. Preston St.; Bovee University Center, Suite 306; Mount Pleasant, MI 48858; **Email:** [titleix@cmich.edu](mailto:titleix@cmich.edu); **Phone:** 989-774-3253

### Nondiscrimination Policy

CMU's Nondiscrimination Policy and Equal Opportunity and Affirmative Action Protocol prohibit unlawful acts of discrimination or harassment on the basis of age, color, disability, ethnicity, familial status, gender, gender expression, gender identity, genetic information, height, marital status, national origin, political persuasion, pregnancy, childbirth, or related medical conditions, race, religion, sex, sex-based stereotypes, sexual orientation, transgender status, veteran status, or weight by members of the university community. Prohibited acts of discrimination or harassment include discrimination or harassment in employment, education, housing, public accommodations, public services, and telecommunications. In addition, retaliation for the participation in a protected activity is also expressly prohibited under CMU's policies.

The Office of Civil Rights and Institutional Equity receives and resolves complaints of discrimination and harassment from students, employees, and others. To file a complaint of harassment or discrimination, contact the Office of Civil Rights and Institutional Equity.

To view the Board of Trustees Nondiscrimination Policy and CMU's Equal Opportunity and Affirmative Action Protocol, see [https://www.cmich.edu/office\\_president/general\\_counsel/Documents/p03006.pdf](https://www.cmich.edu/office_president/general_counsel/Documents/p03006.pdf).

### Sexual and Gender-Based Misconduct Policy

CMU's Sexual and Gender-Based Misconduct Policy prohibits sexual and gender-based misconduct, including dating violence, domestic violence/intimate partner violence, sexual assault, sexual exploitation, sexual harassment, stalking, and retaliation by members of the university community. CMU employees who are considered a Designated Official, as outlined in the Sexual and Gender-Based Misconduct Policy, are required, under CMU's policies, to report any information they know about possible sexual and gender-based misconduct to the CMU Title IX Coordinator. Individuals who do not want their concerns reported to the Title IX Coordinator may contact the confidential resources identified in the Sexual and Gender-Based Misconduct policy, such as the CMU's Counseling Center or CMU's Sexual Aggression Services.

The Executive Director of the Office of Civil Rights and Institutional Equity is the Title IX Coordinator for CMU. To file a complaint of sexual or gender-based misconduct or to learn more information about the policy, the Office of Civil Rights and Institutional Equity at Bovee UC 306, Central Michigan University, Mt. Pleasant, MI 48859, 989-774-3253 (fax: 989-774-2022); [cmich.edu/ocrie](http://cmich.edu/ocrie).

To view CMU's Sexual and Gender-Based Misconduct Policy, [https://www.cmich.edu/office\\_president/general\\_counsel/Documents/p03039.pdf](https://www.cmich.edu/office_president/general_counsel/Documents/p03039.pdf)

To file a complaint regarding Sexual Misconduct please click the following link, <https://ocrieconcernreportingtool.apps.cmich.edu/#/>

### Training

The University's Title IX Coordinator and the University personnel who are charged with responding to incidents of sexual and gender-based misconduct on behalf of the University receive mandatory annual training regarding responding to incidents of sexual and gender-based misconduct.

Members of the Central Michigan University Police Department's Special Victim's Investigative Cadre also receive mandatory annual and ongoing training.

Further, as part of our commitment to a safe and welcoming environment, CMU provides both in person and online Anti-Harassment and Discrimination Training and Sexual Misconduct training to its employees.

CMU also provides both in person and online training to its students. The training introduces students to a University-wide conversation on important issues relating to sexual misconduct, such as healthy relationships, substance abuse, bystander intervention, and sexual aggression. The online training is mandatory for all on-campus incoming first-year and transfer students.

### University Ombuds Office

#### Deborah Dodge, University Ombuds

**Email:** [ombuds@cmich.edu](mailto:ombuds@cmich.edu)

**Phone:** 989-774-3010

**Office:** Warriner Hall 214 (1200 S. Franklin St., Mount Pleasant, MI 48858)

The Office of the University Ombudsperson was established to serve the institution in accordance with its core values of integrity, respect, compassion, inclusiveness, social responsibility, excellence, and innovation by welcoming students, staff, and faculty into a confidential space for discussion regarding university-related matters of concern. The Ombuds assists in opening avenues of communication for those in pursuit of resolution and in promoting fair and equitable treatment for all members of the CMU community.

The Ombuds handles all matters in a confidential, impartial, informal, and independent manner.

**Confidentiality** – Visitor concerns are private. The Ombuds will not reveal visitor identity or situation particulars without explicit permission. Visitors may speak openly and privately, but for two exceptions which require formal reporting: 1) an instance of imminent risk to the visitor or others; 2) when a potential violation of the Sexual and Gender-Based Misconduct Policy is made known.

**Impartiality** – The Ombuds may not advocate for a particular visitor but rather, acts as a designated neutral, a resource, championing fair and equitable treatment for all groups and individuals within the institution.

**Informality** – The office does not serve as a point of notice to the university nor does the officeholder act on behalf of the university. The Ombuds has no authority or role in formal processes and neither participates in them nor represents visitors at grievance, disciplinary, or other such hearings.

**Independence** – Ombuds operate independently from other university entities and offices. The Ombuds has sole discretion in determining whether and how to proceed within the scope of its institutional role.

In addition to assisting CMU community members clarify or resolve matters, the Ombuds may identify policies for review or revision and may alert university administration to discernible trends or patterns in the caseload of visitor concerns and inquiries.

The Ombuds can advise those who wish to file a formal complaint or grievance. Seeking consultation with the Ombuds is not a requirement to process, it is strictly voluntary, however doing so provides opportunity to ask questions about formal processes and to make informed decisions about existing options such as which, if any, to pursue.

After listening to visitor concerns, the Ombuds may take one or more of the following actions: 1) review relevant rights, responsibilities, policies, or regulations; 2) aid in generating fair, equitable options; 3) identify other appropriate university resources; or, 4) request supplemental information from the visitor, or with visitor permission, from other parties to better understand context and consider resolution possibilities.

The Ombuds assists all CMU students, staff, and faculty regardless of age, citizenship, disability, economic class, ethnicity, faith, gender identity, gender expression, national origin, race, religion, sex, sexual orientation, social class, and all other identities expressed among CMU's community of scholars.



## Student Academic Division Complaint Tracking Procedures

The purpose of this section is to outline a procedure for tracking student complaints that come to the academic colleges and academic support units. Complaints to be resolved by the academic colleges or support units are those that are not governed by other complaint or appeal procedures. Students need to follow policies and procedures that currently exist. Those policies can be found in their Academic Bulletin (undergraduate or graduate studies) (<https://bulletins.cmich.edu>).

**Definition.** A complaint expresses dissatisfaction with an academic action believed to be unfair or inconsistent with policy or guidelines.

**Procedure.** A record of complaints that are resolved at the level of the academic colleges or academic support units will be documented and retained in each academic college or support unit. Annually, each academic college and support unit will review the complaints in an effort to identify trends and to improve the learning environment. A summary of the complaints that occurred in the previous academic year will be compiled by each academic college and support unit, and submitted annually to the Provost's Office on or before July 31.

For a complete copy of this procedure, see [https://www.cmich.edu/docs/default-source/president's-division/general-counsel/administrative-policy-docs/5/p050075e25c2f8-5377-4a5d-87f3-c341ce82cc1e.pdf?sfvrsn=7f887b07\\_3](https://www.cmich.edu/docs/default-source/president's-division/general-counsel/administrative-policy-docs/5/p050075e25c2f8-5377-4a5d-87f3-c341ce82cc1e.pdf?sfvrsn=7f887b07_3).

## Student Disability Services

Central Michigan University is committed to providing equal access to students with disabilities. Student Disability Services provides accommodations for CMU students with permanent or temporary disabilities who choose to register with our office. Students are encouraged to register as early as possible, as accommodations are not retroactive and do not automatically carry over from high school or another institution. For more information about services, contact Student Disability Services, 120 Park Library, 989-774-3018; <http://cmich.edu/SDS>.

## University Libraries

### Kathy Irwin, Dean

The University Library in the Charles V. Park Library building offers a wide range of resources and services in support of CMU students, faculty, and staff. Its collections contain more than 800,000 print books, 900,000 electronic books, 250 databases, access to the full-text content of 150,000 journals, and more than 125,000 multimedia items. Electronic collections are accessible around the clock from both on and off campus. The University Library is a government document depository library, providing access to items published by the United States Government and the State of Michigan. Items not owned by the library may be obtained from other institutions through the library's Documents on Demand service.

More than just a collection of materials, the University Library provides a wide array of library services. Librarians are available to assist students, faculty, and staff with research projects and to help users effectively access information. Users may consult with a librarian in person, by email, chat, or telephone. The librarians also provide formal, course-specific library instruction to classes upon request by a faculty member.

More than 275 computer workstations, including both Windows and Macs, are available within the building, and wireless access is available for personal laptops and mobile devices. Printers, photocopiers, and scanners are also available. A variety of study spaces exist, including open study tables and carrels, individual study rooms, group study rooms, and collaborative study areas. During the fall and spring semesters, the main library is open more than 100 hours per week and an extended-hours study space is available 24/7. Building hours are shorter during break weeks and the summer semester.

Academic support services located in the Park Library include the Writing Center, the Mathematics Assistance Center, the Statistical Consulting Center, Student Disability Services, the IT Help Desk, the Certified Testing Center, and the Curriculum and Instructional Support office.

Students enrolled in CMU's online and off-campus programs have full access to the library's services and resources. Librarians will provide virtual research assistance and instruction to online and off campus classes. Documents on Demand will deliver electronic and print materials to students upon request.

For more information about the library, visit us online at [library.cmich.edu](http://library.cmich.edu) or call 989-774-1100.

## Clarke Historical Library

The Clarke Historical Library collects print and manuscript items related to Michigan and the Old Northwest Territory. The Library's holdings include more than 87,000 printed items, 5,100 manuscript collections, 12,500 reels of microfilm, 16,000 visual images, and 2,300 maps documenting all aspects of life in Michigan. In addition to this main area of concern, the Clarke Historical Library has also developed a variety of "special" collections. These include the Lucile Clarke Memorial Children's Library, one of the finest collections of children's literature in the country, the Class of 1967 Presidential Campaign Biographies collection, and a large collection of Native American material documenting the Anishinaabe people. The Library also serves as the Central Michigan University archives. Because of the uniqueness of the material in the Clarke Historical Library, items in the Library do not circulate and must be used in the Clarke Historical Library's reading room. The Clarke Historical Library is open from 9:00 am - 5:00 pm on weekdays. Call 774-3864 for more information.

The Clarke Historical Library was established in 1954 with the gift of 1,575 volumes from Dr. Norman E. Clarke Sr., who received his bachelor's degree from Central in 1920. In subsequent years Dr. Clarke Sr. supported the Library through the donation of a large number of books, the establishment of the Lucile M. Clarke Memorial Children's Library, named in honor of his first wife, and the creation of an endowment to partially underwrite the Library's ongoing needs. Dr. Clarke Sr. died in 1984 but his family continues to be actively engaged in the Library's work.

## Information Technology

### Jim Bujaki, Vice President/Technology/CIO

Central Michigan University has a wide variety of technology resources and technology support available for students, faculty, and staff. The Office of Information Technology (OIT) is responsible for providing the CMU community with a diverse and technically rich learning and research environment. CMU and OIT support innovative learning and teaching and maintain a planned investment strategy to keep CMU technology resources at their highest level possible and available to students and faculty. In addition, CMU is working to fully enable mobile computing for its students and faculty with efforts focused on these areas:

- CMU is expanding and strengthening an already robust wireless network.
- CMU students receive a printing allocation that is usable in labs and print stations across campus.
- CMU students receive 1 TB of cloud-based storage through CMU's partnership with Microsoft.
- CMU is employing a number of strategies to deliver required software to its students and faculty.
- CMU services are being designed for delivery to a variety of mobile devices.
- CMU provides cross-platform text chat and automated remote support tools that allow students to access technical support directly from their personal computers.
- CMU provides cost-effective student purchase plans for laptop computers and other mobile devices.

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**E-mail Services for Students:** Upon acceptance to CMU, students are assigned a CMU e-mail address. This e-mail address is the official address to which course-related correspondence and billing notices are sent. It is very important that students check their CMU e-mail address regularly, and they will be held responsible for mailings issued to that address. CMU e-mail can be accessed at <https://office365.cmich.edu>.

**Centrallink:** Central Michigan University offers a web portal located at: <https://www.cmich.edu/centrallink>. Centrallink is designed with CMU students, faculty and staff in mind, and provides the CMU community comprehensive information in a number of different areas, such as activities, academics, employment, available services and access to a variety of individual records.

**OIT Help Desk:** The Office of Information Technology Help Desk is housed in the first floor of Park Library, and is the first point of contact for all technology related questions. The OIT Help Desk assists students, faculty, and staff with university-sponsored technology services, general computing questions, and computer repairs. Contact the Help Desk at 989-774-3662, by email at [helpdesk@cmich.edu](mailto:helpdesk@cmich.edu), or visit <http://it.cmich.edu> and click the remote chat button.

**The CMU Network:** CMU maintains a very comprehensive networking infrastructure to support the work of its students, faculty and staff. In addition to the traditional wired Ethernet network, wireless access is available in all of CMU's residence halls and academic buildings. Computer users are required to register their machines to use the network and are presented with the online registration process when they first access the CMU network.

**Emergency Notification System:** CCMU has implemented measures to enhance communication in the event of an emergency. Students, faculty, and staff are automatically registered to receive phone calls, text messages, or alternative email address alerts through CMU's Central Alert system. Contact settings can be changed by going to <https://www.cmich.edu/centrallink> and accessing My Account and going to "My Profile."

**Cellular Phone Services:** OIT offers Verizon, AT&T, T-Mobile, and Sprint cellular phone service and equipment through the Telecom Service Center. Competitive rates are available to all students, faculty, and staff. For additional information, contact the Telecom Service Center at 989-774-3087, or visit <http://connect.cmich.edu>.

**Computer Purchases:** CMU offers discounted and highly competitive purchasing opportunities with several major computer manufacturers. These opportunities are available to all CMU students, faculty, and staff. Find out more by visiting [https://www2.cmich.edu/fas/fsr/cps/Purchasing/Pages/facu\\_staf\\_stud\\_offer.aspx](https://www2.cmich.edu/fas/fsr/cps/Purchasing/Pages/facu_staf_stud_offer.aspx).

**Office Software:** Through CMU's partnership with Microsoft, CMU students are eligible to download and use the latest version of Microsoft Office at no cost for as long as they are current students. This software can be downloaded by visiting <https://office365.cmich.edu> and choosing Office 365 in the Settings menu.

**Public Computer Access:** CMU provides access to over 300 computer workstations to the CMU and Mt Pleasant community in Park Library, located near the center of campus. Computers can be accessed on each of Park Library's four floors, with late-hours access available to students by card swipe in the Extended Hours Study at the north end of the building. All of these computers are preconfigured for PrintQ access, and some have access to specialty software.

**Acceptable Use Policies:** All users who operate or use any of the computing systems and networks of the university must abide by the Responsible Use of Computing policy. The *Responsible Use of Computing* policy and other OIT policies are published on the OIT web site (visit <http://it.cmich.edu>). The policies are intended to supplement other existing university and external policies, regulations and laws.

For information about OIT services, or if you have questions, please call the OIT Help Desk at 989-774-3662 or visit <http://it.cmich.edu>.

## CMU Police

### Police Department Overview and Information

The Central Michigan University Police Department works in partnership with the entire university community to maintain a safe, secure, and orderly living and learning environment. We work very hard to keep our campus safe, while also continuing our focus on service. Our department is professionally staffed 24-hours a day by certified police officers, dispatchers, and support staff.

Additional information about our department can be found at [police.cmich.edu](http://police.cmich.edu).

**Address:** 1720 S. East Campus Dr., Mount Pleasant, MI 48859

**Telephone:** (989) 774-3081 (Please call 911 for all EMERGENCIES)

**Email:** [police@cmich.edu](mailto:police@cmich.edu)

### Annual Security and Fire Safety Report

Current and prospective students, faculty, and staff are encouraged to view/download the Annual Security and Fire Safety report located at [www.cmich.edu/asr](http://www.cmich.edu/asr). This document contains relevant safety information and statistics for the previous three calendar years.

### University Policy for Use of Motor Vehicles

Students must register any motor vehicle which they park on the university campus with the CMU Police/Parking Services Department. Permits are virtual and automatically active when purchased online. License plates must face the drive lane at all times while parked on campus.

Any student who has a vehicle on campus is expected to become familiar with, and abide by, university traffic and parking regulations. Regulations and designation of parking areas for specific permits are published with the campus map, available at the CMU Police/Parking Services Department or [online](#).

Bicycles are also registered free of charge at the CMU Police/Parking Services Department.

Full information can be found online at the [Parking Services website](#).

## Counseling Center

**Melissa Hutchinson, Executive Director/Counseling Services**

**Kristie Miner, Associate Director**

**Foust Hall Suite 102, 989-774-3381**

**[www.counsel.cmich.edu](http://www.counsel.cmich.edu)**

The CMU Counseling Center provides mental health support for students with personal concerns that can negatively impact their academic success, interpersonal relationships, health, or well-being. We recognize that each student is a unique individual with different stories, experiences, and needs. We strive to create an open, safe, and inclusive environment where students can freely explore and express all identities, beliefs, and values they hold.

Taking care of your mental health is essential for your own personal and academic success. We offer a variety of services to meet each student where they are, and honor individual needs. Individual counseling services are short term and provided in person on the main campus, or via tele-mental health for students living in the State of Michigan. Community referrals are made for concerns requiring long term care. Urgent appointments are available for students with concerns requiring immediate attention. Support groups provide opportunities to connect with peers who share similar concerns. Drop-in activities offer stress relief and development of coping skills. To schedule an appointment, students can call or complete a request for services. All Counseling Center services are free to currently enrolled CMU students. Please visit our website for detailed information regarding staff, services, resources, and self-help.

### Residence Life Care Advocate Program

Sponsored by the Office of Residence Life, the Care Advocate Program places licensed mental health professionals directly in the residence halls. Their mission is to provide staff consultation, support, crisis intervention and proactive prevention efforts addressing mental health issues, and to act as a bridge to partner offices supporting the personal growth and academic progress of students. Services are free.

- East Area Student Success Center (989-774-1879)
- South Area Student Success Center (989-774-3089)
- Towers Student Success Center (989-774-6601)

### CMU Student Health Services

**Mission:** Our mission is to focus on improving the health and wellness of CMU students and the University community by providing personalized medical care and treatment, disease prevention and health promotion services tailored to their dynamic needs. Emphasis on educating students to become informed health care consumers, encouraging them to be an active partner in their treatment plan, and supporting them in healthy decision-making is key.

**Eligibility:** All regularly enrolled CMU students, CMU faculty, staff, their spouses and dependents 14 years of age or older, and other authorized users are eligible to use CMU Health.

#### Location and Hours:

- **Foust Health Clinic** is located in Foust Hall, Room 200. It is open year around Monday-Friday, 8 a.m. to 12 noon and 1 to 5 p.m. To schedule an appointment, call 989-774-6599. ADA accessible doors are located at the north and west entrances.
- **Towers Health Clinic** is located in Troutman Hall, Room 103. This clinic operates on a walk-in basis only and is open during the academic year. Hours vary by semester.

**Clinical Services Available:** Our staff consists of physicians, physician assistants and nurse practitioners who are board-certified and fully qualified to provide holistic care and psychiatry services. CMU Health provides acute care and other specialty services for CMU students while they are away from home. Our professional medical staff can work hand-in-hand with your primary care doctor or specialist to manage ongoing treatments and services while you are attending CMU.

Services include diagnosis and treatment of acute illnesses (sore throat, flu, infections, etc); chronic illness management while away from home; prescription management; injury care (sprains, wounds, etc); sexual health services (gynecological exams, birth control, pregnancy testing, and sexually transmitted infection testing); allergy shots and immunizations. Our clinic also provides physical exams including sports physicals, study abroad clearances, and a travel health clinic. See us for anxiety, depression, sleep disturbance management; referrals are available. CMU Health also has a behavioral health clinic with an on-site Psychiatrist.

Our on-site laboratory, operated by Quest Diagnostics, provides fast and convenient lab testing and accepts orders from outside providers. X-rays and other diagnostic imaging services are available through an agreement with a local off-site radiology clinic.

**Health Education Services Available:** A Health Educator is available to assist with programs and act as a resource for students. Emphasis is on creating and maintaining an environment that fosters healthy decision making and lifestyles.

**Billing and Insurance:** As a courtesy, we will bill any insurance; however, we do not participate with every insurance and we are not in-network with every insurance. It is always the patient's responsibility to know their policy benefits and how their carrier will process claims for services provided at our on-campus clinics. We urge patients to call the number on the back of their insurance card and ask questions about coverage and benefits while they are away from home, and attending CMU. Patient balances deemed to be patient responsibility will be sent directly via a monthly statement. If a balance becomes "Past Due", accounts will be referred to an active CMU Account where processing fees will be applied to credit card payments. Past due accounts may be referred to an outside collection agency. Patient will be responsible

for all associated collection costs including litigation and reasonable attorney's fees necessary for collection of this debt. Once the account is referred to a collection agency, the past due account will be reported to the national credit bureaus.

**Student Health Insurance:** It is highly recommended that all CMU students have health insurance coverage. Insurance helps protect the student's physical, mental and financial health. CMU does not offer a student health insurance plan nor can staff recommend or advise of appropriate independent plans available to students; however, information is readily available on-line and through local and state agencies. Students who are uninsured or underinsured qualify for self-pay discounts on most services. Please discuss this option with Registration staff when calling for an appointment.

**Concerns, Comments, Suggestions:** Student Health Services seeks to continually improve services. Concerns and suggestions regarding the services may be shared by completing a Patient Satisfaction Survey at the time of the visit, speaking with a staff member or unit manager, or sending an email to [healthservices@cmich.edu](mailto:healthservices@cmich.edu).

**Medical Records:** Medical records are maintained for students and other authorized patients and will not be released to anyone without the patient's written authorization, except as required by law.

**Additional Information:** For additional information about Student Health Services, visit the CMU Health website at [www.cmuhealth.org](http://www.cmuhealth.org).

### Living on Campus

#### Campus Residency Policy

Central Michigan University's campus residency policy requires that first and second-year students live on campus. Those who reach the four-semester requirement at midyear are required to complete the entire term of the contract for the academic year (fall and spring semester).

All Office of Residence Life housing contracts are for one academic year. If a student does not qualify for an exception to the policy at the beginning of the year, the student must fulfill the agreement even though the student may become eligible for an exception during the year. Requests for exception must be submitted in writing to the Office of Residence Life.

#### Enrollment

Undergraduate and graduate residents must be registered as full-time students.

#### Residence Halls

CMU has 16 coed residence halls in three residential communities. Each community offers a Student Success Center, where student service professionals work as a team to help residents become successful students. All residence halls are tobacco and smoke free for the health of all students.

Questions concerning housing should be addressed to the Office of Residence Life at [reslife@cmich.edu](mailto:reslife@cmich.edu) or 989-774-3111.

#### Living Learning Communities

In an effort to integrate the use of all of our campus resources in the education and preparation of the whole student, we join with faculty members in several departments to offer the following living learning communities:

- Business Residential College
- Education and Human Services Residential College
- Health Professions Residential College
- Honors Program Residential College
- Leader Advancement Scholars
- Multicultural Advancement and Cofer Scholarship (MAC Scholar) Residential College
- Public Service Residential College
- School of Music Residential College
- Science and Engineering Residential College

**Note:** Living Learning Communities comprise one or more floors of a residence hall, so students who do not have an interest in a specific academic program may still apply for these halls.

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## University Apartments

There are 285 university apartments available on campus. One-, two-, and four-bedroom apartments are assigned according to date of application.

### Eligibility for Northwest Apartments:

- Single undergraduate students who have lived in the residence halls for two academic years;
- Transfer students;
- Applicant must be a full-time Central Michigan University student.

### Eligibility for Graduate Apartments:

- Single graduate students;
- Applicant must be a full-time Central Michigan University student.

Our single student apartments are furnished. Rates include laundry, utilities, and internet. Contracts are available for the entire academic year or the summer session. Application process is online and requires a global ID and active password.

Questions concerning the University Apartments should be addressed to the Office of Residence Life at [reslife@cmich.edu](mailto:reslife@cmich.edu) or 989-774-3111.

## CMU Dining

Food. It's how we relax, relate, and reconnect. Nutrition is an integral part of the college experience. The campus at CMU is conveniently covered with 15 different dining locations that open as early as 7:00 a.m. and close as late as 2:00 a.m. From all-you-care-to-eat residential restaurants to the food court, coffee houses, and convenience stores... you get quality, variety, and convenience—all at a great value—no matter where you're at on campus.

### Meal Plans for Everyone

Whether you're a resident or commuter student, you've got options when it comes to dining on campus. Meal Plans and FLEX Passes are available with different levels of meal swipes and FLEX Dollars to fit your dining habits and busy schedule while providing a range of delicious and healthy options to nourish your campus experience. View options online at [www.cmucampusdining.com/MealPlans](http://www.cmucampusdining.com/MealPlans).

### Managing Food Allergies & Your Nutrition on Campus

At CMU Campus Dining, we believe that good nutrition is essential to good health. That's why we are committed to nourishing each and every student by providing them with healthy, nutritious foods every day. Please use the list of resources below to help manage your nutrition while dining on campus by visiting [www.cmucampusdining.com/HealthAndWellness/OnCampusResources](http://www.cmucampusdining.com/HealthAndWellness/OnCampusResources).

- **Special Dietary Solutions** – Take a look at the comprehensive suite of resources to help you manage your nutrition while dining at CMU with our Special Dietary Solutions guide.
- **Food Allergies** – We support students with food allergies by providing the knowledge and resources that are necessary for students to make informed food choices in our dining locations. Please consult our Guide to Managing Food Allergies.
- **Personal Menu Consultation** – We recognize and accommodate your dietary needs in a way that's personalized, sensitive, and supportive. Contact CMU Campus Dining for a personal menu consultation by submitting your Online Student Profile regarding your food allergy or intolerance.
- **NetNutrition** – Online menus, full ingredient listings, and nutritional information is at your fingertips while dining on campus. Visit [NetNutrition.cmich.edu](http://NetNutrition.cmich.edu) from any computer, mobile device, or the iPad kiosks inside each residential restaurant at CMU.
- **Healthy For Life Commitment** – Learn more about our partnership with the American Heart Association and our Healthy For Life commitment to improve the health of Americans 20% by 2020.
- **Feed Your Potential** – Discovering and choosing the right foods can help you unleash your best and keep you healthy. Our chefs and dietitians understand how challenging this can be, so we're here to help you discover what healthy foods can do to Feed Your Potential every day.

## Changing Your Meal Plan

Residential students can change their meal plan prior to the fall and spring semesters by logging into their housing application at [housing.cmich.edu](http://housing.cmich.edu). Once classes begin for each semester, meal plan changes can be made during the first four weeks for a \$15 fee with the CentralCard Office via the Meal Plan Change Request Form at [www.cmucentralcard.com](http://www.cmucentralcard.com).

### Stay Connected

Check out Campus Dining on Instagram, Twitter, and Facebook to discover when and where the Food Crew is out and about on campus giving out free samples, playing games, selling discounted FLEX Dollars, and handing out coupons for big savings. Visit our website for the inside scoop about campus dining. Get menus, nutrition information, current hours of operation, sign up for a FLEX Pass or add-on FLEX Dollars, find job openings, FAQs, and more.

Web: [www.cmucampusdining.com](http://www.cmucampusdining.com)

Instagram: [www.instagram.com/cmucampusdining](http://www.instagram.com/cmucampusdining)

Twitter: [www.twitter.com/cmucampusdining](http://www.twitter.com/cmucampusdining)

Facebook: [www.facebook.com/cmucampusdining](http://www.facebook.com/cmucampusdining)

Email: [dining@cmich.edu](mailto:dining@cmich.edu)

Phone: 989-774-6406

Campus Address: Foust 100

## Bovee University Center

The Bovee University Center is located in the center of campus, which makes it a popular gathering place for students, faculty and staff. The Center provides the University community opportunities for involvement in group discussions, meetings, conferences, informal conversations, and social activities, with meeting and conference rooms and catering services available. A variety of entertainment and special events are sponsored in the University Center throughout the year, making it an exciting place to be.

Services and offices that are located at the Bovee University Center include the Campus Information desk, Student Service Court, the CentralCard Office, the Office of Student Activities and Involvement, Student Employment Services, the Mary Ellen Brandell Volunteer Center, Civil Rights and Institutional Equity, and the Center for Student Inclusion and Diversity. First Impressions (free attire for CMU students) is also located in the UC. The Student Government Association, Program Board and many other student organizations are housed there as well. Several retail operations are provided, such as the Bookstore, which carries a full line of required class materials, student supplies, CMU clothing, and gift items; Independent Bank; MEDIAgraphix, a post office, and a copy center. Several food service operations are offered, including Starbucks® Coffee, and more.

## Printing Services/Copy Centers

Printing Services is a full service, four color operation equipped to handle the university's on- and off-campus printing needs. Printing Services also offers full pre-press services, including computerized image assembly, and full bindery services with various options in finish work. The university's standard class bulk mailing operations are also a part of Printing Services. Classes interested in printing are welcome to arrange tours of the printing facility.

Copy Centers to accommodate faculty, staff, and students are located in the Bovee University Center, and the main printing facility located in the Combined Services Building. See <https://www.cmich.edu/fas/ras/printing/Pages/default.aspx>

## University Recreation (URec)

**Stan Shingles**, Assistant Vice President

SAC 200; 989-774-3686

University Recreation (URec) is inclusive, providing customized opportunities and experiential learning while fostering lifelong health and wellbeing.

University Recreation (URec) manages the Student Activity Center (SAC), the Outdoor Sports Complex, the Outdoor Tennis Complex, and an 18-Hole Championship Disc Golf Course.

The Student Activity Center (SAC) is 180,000 square feet of dedicated recreation space and has hosted more than 20 million visitors since it opened in 1990. With a spacious and dynamic environment, the SAC provides fitness, recreation programming and events, meeting the needs of our diverse student and university community.

The John G. Kulhavi Events Center which opened in 2010, plays host to a series of on-campus and off-campus events including: CMU Athletics, Concerts, Commencement, Community Events, Performing Arts, and also provides services through Ticket Central.

Facilities are provided for aquatics, events, fitness and weight training, group fitness, racquetball courts, an Injury Care Center and sports forums for basketball, tennis, volleyball, a myriad of outdoor sports fields and CMU's 18-hole Disc Golf course.

In addition, URec offers comprehensive fitness programs designed to meet all fitness levels and wellness interests. URec offers over thirty group fitness classes and personal trainers are available to provide assessments, goal-setting and specialized programs.

Learn to Swim programs are available throughout the year. UREC manages the SAC Pool, there are several hours per day dedicated to leisure swimming opportunities.

The Intramural Sports program offers more than thirty leagues with something for everyone, from one-day special events to semester long individual and team sports. Activities are offered in three divisions: men, women, and co-recreational.

Club Sports compete at an extramural level with over forty sports offered, providing an excellent opportunity to practice leadership, organization and teaching skills. These clubs are self-directed and offers highly competitive and instructional opportunities.

Special events are held in the SAC and the Events Center, including Special Olympics Michigan, Alumni events, SIBS weekend, CMU Up All Night and Leadership Safari.

URec offers a wide variety of employment opportunities, employing more than 125 students during the academic year, and also offers students experiential learning opportunities to support their academic and curricular interests.

We are a premier recreation and events provider with a national reputation for excellence. For more information about URec programs and facilities, contact University Recreation at 989-774-3686 or visit [www.urec.cmich.edu](http://www.urec.cmich.edu).

## Varsity Athletics

**Amy Folan**, Zyzelewski Family Associate Vice President/  
Director of Athletics

Rose Center 100A; 989-774-3041

Many students participate in the men's and women's athletic programs under the guidance of experienced coaches. It is our intention to field teams composed of student athletes who compete with excellence, integrity, intensity, and teamwork.

The men's and women's programs have Division IA classification in the NCAA and the University complies with the code of that association. All CMU teams are affiliated with the Mid-American Conference.

The men's program sponsors baseball, basketball, cross country, football, and wrestling.

The women's athletic program includes basketball, cross country, field hockey, gymnastics, golf, lacrosse, soccer, softball, indoor and outdoor track, and volleyball.

Students must be enrolled full time and be in good standing with the university to participate in intercollegiate athletics for CMU. Contact the head coach for additional information on any particular sport. See [www.cmuchippewas.com/](http://www.cmuchippewas.com/).



## Student Enrichment

### Biological Station on Beaver Island

Central Michigan University Biological Station (CMUBS) is located on Beaver Island in northern Lake Michigan about 32 miles northwest of Charlevoix. These facilities, nestled among 48 acres of pristine habitat, are located on the eastern shore of Beaver Island, and are about six miles south of the island's only village, St. James. CMUBS offers a diversity of academic courses during the spring and summer months and provides research facilities throughout the year. A spacious Academic Center with state-of-the-art teaching laboratories, computer laboratory, library, and full-mediated lecture room is available and equipped to accommodate courses that rely on both laboratory and field experiences. A bookstore, natural history museum and research buildings are also provided as classroom support. Additionally, CMU owns 310 acres elsewhere on the island that serve a variety of field courses offered at the station by providing highly diverse sites for field trips, research and other activities. CMU also owns the completely renovated former Coast Guard boathouse, located on Whiskey Point in St. James at the north end of the island, which houses research vessels and a state-of-the-art experimental mesocosm facility.

Students reside in either dormitories or rustic cabins in the modern CMU campground, eat in the cafeteria and relax and study in the spacious Matt and Ellie Hohn main lodge. Its location among a variety of natural habitats makes CMUBS an ideal location for a biological station. For more information, contact [cmubs@cmich.edu](mailto:cmubs@cmich.edu) or see <https://www.cmich.edu/academics/colleges/college-science-engineering/centers/cmu-biological-station>.



### Brooks Observatory

The Brooks Astronomical Observatory, located atop Brooks Hall, is administered by the Department of Physics. The dome contains a modern 16-inch telescope and an observation platform for naked eye or small telescope observing. It offers an excellent view of the campus.

The observatory facilities are open to students and the public one evening each month during the academic year. Weather permitting, visitors can view celestial objects with the telescope. Contact the Department of Physics for open night schedules or to arrange special viewing sessions for groups. Further information about the observatory and the open nights can be found at: <https://www.cmich.edu/academics/colleges/college-science-engineering/centers/brooks-astronomical-observatory>.

### Neithercut Woodland

Neithercut Woodland, an area of approximately 252 acres, is located about four and a half miles northwest of the village of Farwell on Michigan Route 115. This natural woodland area was a gift to CMU by William A. Neithercut, class of 1909. The Woodland contains three hiking trails. Exhibits, demonstrations, and experimental facilities for developing innovative approaches to environmental education are also available at Neithercut Woodland. The McNeel Center building is constructed of cedar logs and its 1,900 square feet of floor space provides a central meeting room, kitchenette, laboratory, storage area and rest rooms. Up to 50 people can be accommodated in the center. Neithercut Woodland is available for students and the public on a year-round basis. For information, call 989-774-3227.

### The Museum of Cultural & Natural History

The Museum of Cultural & Natural History in Rowe Hall is devoted to formal and informal learning through the study of real objects. The museum's foundation rests on its extensive collections of anthropology and archaeology, geology, Michigan history, and zoology. Collection items are available for use by faculty, staff and students to enhance classroom learning and are loaned to school groups in the region. The museum also serves as the laboratory for the Museum Studies minor.

Faculty in anthropology, art, biology, geology and history regularly make use of collections, exhibits and learning laboratories. In addition, programs are scheduled in the Gerald L. Poor School Museum, a one-room schoolhouse located at the corner of Preston and West Campus Drive. Museum exhibits and visual collections storage are located in Brooks Hall, Beaver Island Biological Station, and Neithercut Woodland as well as the main exhibit hall and temporary exhibit gallery in Rowe Hall.

For more information, visit the office in 103 Rowe Hall or call 989-774-3829.

### Mary Ellen Brandell Volunteer Center

The Mary Ellen Brandell Volunteer Center is dedicated to developing active citizenship among CMU students by providing unique and dynamic programs, coordinating civic engagement efforts and facilitating networking among service leaders across campus. The Volunteer Center houses a searchable online database (OrgSync) of volunteer opportunities for CMU students, coordinates civic engagement efforts across campus, and offers many programs, including Adopt-A-Grandparent, Alternative Breaks, America Counts and Reads, David Garcia Project Disabilities Awareness, Lunch Buddies, Safer Sex Patrol, and Service Ambassadors. Additionally, the Volunteer Center provides leadership for special events throughout the academic year, including: Issue Day, MLK Jr. Day of Service, Valentines for Veterans, Be My Neighbor Day, and various other events.

For more information: Bovee UC 106; 989-774-7685; [volunteer.center@cmich.edu](mailto:volunteer.center@cmich.edu); or see the website at [www.volunteer.cmich.edu](http://www.volunteer.cmich.edu).



## Special Olympics Michigan

Special Olympics Michigan provides year-round sports training and athletic competition in 23 sports for children and adults with intellectual disabilities. CMU students can help change lives by volunteering at the State Summer Games held on campus or at the State Winter Games in February, being a Unified Sports team athlete for inclusive opportunities, or becoming an intern. CMU volunteers can become involved in the local Special Olympics program either in Mount Pleasant or in their home communities. For more information or to become a volunteer, call 989-774-3911 or visit the website at [www.somi.org](http://www.somi.org).

## Musical Events

The School of Music offers a wide variety of musical events, most of which are available at no charge to students and the general public. For a listing of upcoming events, see <https://www.cmich.edu/academics/colleges/college-arts-media/departments-schools/school-of-music>.

## University Theatre

Each year, the University Theatre presents a season of productions offering a range of periods and styles. Open auditions are held for every area of the production. Audiences enjoy discounts on multiple ticket purchases, and there are special student rates for performances. For information, call Ticket Central at 989-774-3000 or see <https://www.cmich.edu/academics/colleges/college-arts-media/departments-schools/theatre-dance/university-theatre>.

## University Art Gallery

The mission of the University Art Gallery is to provide an opportunity for the University community and mid-Michigan communities to view exhibitions of contemporary art. UAG generates and provides educational access to exhibitions featuring both emerging and established regional, national, and international artists. UAG works to promote the discussion of contemporary art through artist lectures, residencies, and workshops. As part of the Department of Art & Design, the gallery serves as a unique classroom for students, providing opportunities for exhibitions, hosting a juried student exhibition, and providing internships. Central Michigan University faculty and alumni are routinely exhibited. In addition, the UAG provides exhibition tours and works with area schools to develop appropriate educational outreach programs for K-12 students.

The University Art Gallery is located in the A-Frame building at the corner of Franklin and Preston Streets. The gallery is open Tuesday through Friday, 11 a.m. to 6 p.m. and Saturday, 11 a.m. to 3 p.m. or by appointment (989-774-3800). For a schedule of exhibitions, please see <https://www.cmich.edu/academics/colleges/college-arts-media/departments-schools/art-design/university-art-gallery>.

## Student Media

### Student Publications

Moore Hall 436

989/774-3493

Fax: 989/774-7805

[www.cm-life.com](http://www.cm-life.com)

David Clark, Director of Student Publications

Kathy Simon, Assistant Director of Student Publications

- *Central Michigan Life*

Celebrating 96 years on campus, *CM Life* is a nationally-recognized, student-run media company that employs more than 100 students. Editors and reporters publish university, local and state news on [cm-life.com](http://cm-life.com), in print editions twice per week and produce podcasts. The company also employs advertising students who sell print and digital products, public relations students who offer promotional services and a creative services team that offers graphic design solutions. Advertising students also staff Social Café, an ad agency that offers print, digital and social media products to campus and community customers. Follow CM Life on Twitter, Facebook, Instagram, Snapchat, Pinterest and iTunes.

- *The Central Review*

The creative arts magazine of the university, the *Central Review*, is edited and published by students. It is published each semester and contains commentary, poetry, and creative writing.

### Cocurricular Electronic Media

Located in Moore Hall, the School of Broadcast and Cinematic Arts operates the following facilities to provide BCA students with a broad spectrum of professional training opportunities:

- **Moore Hall Television** is a full-time cable television station transmitting to the campus on channel 34 and the community on channel 189, MHTV offers practical experience in all phases of television programming, including *News Central 34*, mid-Michigan's only daily television newscast. Other featured series regularly include sports, game and reality shows, as well as scripted entertainment productions.
- **WMHW-FM** is a two-service HD station broadcasting digitally and at 91.5 and 101.1 on the analog band. Moore Rock 91.5 provides multiple counties with cutting edge music and extensive sports coverage. Mountain 101 offers the greater Mt. Pleasant area an Album Adult Alternative format. Both stations are streamed worldwide at [www.wmhw.org](http://www.wmhw.org) and provide student broadcasters with intensive immersion in every aspect of programming and managing a dual station cluster.

## Outreach

### University Advancement

Carlin Alumni House; 989-774-7161

Advancement serves as the administrative home of the CMU Alumni Association, Development, Planned Giving, Annual Giving, Research and Corporate Relations. This team generates private gift revenues from individuals, corporations and foundations in order to have a positive impact on student success. In pursuit of its mission, Advancement provides leadership to complement, encourage, and support university wide efforts to acquire transformational investments in students, faculty and facilities. Advancement seeks to ensure the continuity of the fundraising effort and to achieve a continual and substantial growth in gift revenues throughout the university. For assistance or additional information, contact the office at 989-774-7161.

### Alumni Relations

The office of Alumni Relations enhances the lifelong relationship between the university and its graduates. Alumni are encouraged to return to campus and participate in traditional campus activities such as Homecoming and Alumni Reunion Weekend. Additionally, CMU alumni can get involved in local or regional alumni chapters, clubs and networks. Alumni are presented with ample opportunities to participate in a variety of fun events such as pro sports games, musicals, plays, golf outings and more to strengthen their connection to CMU.

The Alumni Office helps foster a sense of spirit and pride in Central Michigan University students through the *Future Alumni Association*. The association was established to create opportunities for both alumni and students to build relationships and assist with the growth and development of CMU.

The Alumni Relations Office also publishes *Centralight*, the alumni magazine, three times yearly and online as a source of campus and alumni news to communicate with graduates of CMU.

CMU encourages alumni to enjoy an ongoing relationship with the university and to remain active with their alma mater. In recognition of this lifelong relationship, Central Michigan University has dedicated the Carlin Alumni House on campus to welcome over 220,000 graduates. For further information, please contact the Executive Director of Alumni Relations, located in the Carlin Alumni House at telephone 989-774-3312 or toll free 800-358-6903.

### Government and External Relations

**Tobias A. Roth, Associate Vice President**

Warriner 208; 989-774-3871

#### Government Relations

The Government Relations office works closely with state, federal and local officials on funding and policy issues that impact the CMU community. The office also works closely with students, faculty and administrators, in planning and developing CMU's response to proposed legislation, agency policies and developing relationships with key policy makers. The office also facilitates meetings with policy makers and handles inquiries from legislators regarding CMU's academic and research activities on campus. For additional information please contact the Government Relations Office at 989-774-3871.

### WCMU Public Media

WCMU Public Media has provided television and radio programming and other outreach activities for more than 50 years to residents of 52 counties in central and northern Michigan and portions of Ontario. With four television and eight radio stations, WCMU Public Media is one of Central Michigan University's primary public service initiatives.

**WCMU Public Television:** CMU owns and operates public television stations WCMU-TV, Mount Pleasant; WCML-TV, Alpena; WCMW-TV, Manistee/Ludington; and WCMV-TV, Cadillac/Traverse City.

WCMU Public Television, a Public Broadcasting Service affiliate, offers programs that educate, inspire and entertain. These programs include a combination of national programs, such as the award-winning PBS children's programs, *Antiques Roadshow*, *NOVA*, and *Masterpiece Theatre*, and high quality local programs including, *Ask the Specialists*, *Quiz Central*, *Capitol Report* and the award-winning *Destination Michigan*.

**WCMU Public Radio:** The WCMU Public Radio network, an affiliate of NPR, is comprised of eight transmitters, WCMU-FM, Mount Pleasant; WCML-FM, Alpena; WCMB-FM, Oscoda; WWCM-FM, Standish; WUCX-FM, Bay City; WCMZ-FM, Sault Ste. Marie; and WCMW-FM, Harbor Springs and 95.1, Traverse City.

WCMU Public Radio provides outstanding programming around the clock. In addition to national programs such as *Morning Edition* and *All Things Considered*, our radio network offers a wide range of local programs featuring classical music, jazz, and award-winning local news and information.

WCMU Public Radio and Television also serves as a training ground for Central Michigan University students pursuing broadcast related careers. Each semester, at least 25 students work in a real-life learning environment under the mentorship of WCMU Public Media's professional staff. The studios are located at 1999 E. Campus Drive, Mount Pleasant.

### University Communications

**John Veilleux, Vice President & Chief Marketing Officer**

West Hall; 989-774-3197

University Communications (UComm) promotes CMU to audiences throughout the state, region, and world.

Four units in University Communications provide strategic communication and marketing services for the entire university, including on campus, online and satellite centers nationwide:

The communications team leads the university's external and internal communications, including feature stories, news releases, media relations, photos and video, electronic news digests, executive communications, and social media.

The integrated marketing team combines strategy and analysis to advance CMU's brand and reputation through channels such as student recruitment materials, advertising, digital marketing, and the CMU website.

The visual media team produces and provides consultation on visually compelling products such as university publications, videos, college and alumni magazines, graphics, admissions materials, and CMU signage.

The digital strategy team works with partners across campus to provide training and consultation on everything digital media, including website best practices, email marketing, mobile app development and more.

# Admissions «

## Admissions Office

102 Warriner Hall

989-774-3076

FAX: 989-774-7267

e-mail: [cmuadmissions@cmich.edu](mailto:cmuadmissions@cmich.edu)

<https://www.cmich.edu/admissions-aid/undergraduate>

<https://fireup.cmich.edu/apply/>

This section describes the university's policies and procedures that affect undergraduate students and programs. It is important to remember that these are the general policies; individual programs may have more rigorous standards for admission, program completion, or graduation. It is also important to remember that policies are not static. They are reviewed periodically, and sometimes, following appropriate university procedures, they are changed. When changed, they are printed annually in the Bulletin, and made immediately in the online version when necessary. The University recognizes that individual circumstances may create a situation in which it is appropriate to grant an exception to a policy given in this *Bulletin*.

## Academic Background

Your academic success at Central Michigan University is greatly enhanced when your preparation includes a solid academic foundation. To prepare for university admission and academic challenge, you will want to strive for high achievement in rigorous subjects.

### Recommended high school background:

- English 4 years
- Fine and Performing Arts 2 years or more
- Foreign Language 2 years or more
- Mathematics 4 years
- Biological and Physical Science 4 years
- History and Social Science 4 years
- Computer Literacy 1 year

A student may enter Central Michigan University at the beginning of any session:

- Fall Semester (August - December, 16 weeks)
- Spring Semester (January - May, 16 weeks)
- Summer Session I (May - June, 6 weeks)
- Summer Session II (June - August, 6 weeks)

Your admission and matriculation at this university are privileges with certain responsibilities. The university reserves to itself, and the student concedes to the university, the right to cancel admission and matriculation and to require withdrawal whenever it becomes evident that the student is not conforming to the standards of scholarship or conduct established by the university.

## Freshman Admission

**Admission Requirements.** If you are a high school graduate or equivalent, you may be admitted provided a prediction of success at CMU can be determined from your high school performance, SAT/ACT scores, and all other information included in the application.

**When to Apply.** You should apply at the beginning of your senior year in high school or as soon as possible. If you have completed high school, we encourage you to apply at least six months in advance of your anticipated semester or session.

**How to Apply.** Apply online at <https://fireup.cmich.edu/apply/>. If you are unable to access the application online, contact us at (989) 774-3076 or by email at [cmuadmissions@cmich.edu](mailto:cmuadmissions@cmich.edu).

- Complete the application for admission and submit the \$40 application fee (or a qualifying waiver).
- Submit your official high school transcript(s) or equivalent.
- Send your official ACT or SAT scores. Entering freshmen are required to take the SAT or ACT. Contact your high school counselor for information about the testing procedure. Note: Temporary exceptions to this policy for 2023 terms are posted at <https://www.cmich.edu/admissions-aid/undergraduate>.

## Transfer Admission

**Admission Requirements.** If you are transferring from a community college or another college or university, you will be considered for admission to CMU provided your official records demonstrate your ability to successfully complete academic coursework.

A student who is dismissed from another collegiate institution is ineligible for consideration at CMU for at least one semester following dismissal.

**When to Apply.** Students are encouraged to apply 8-12 months in advance of anticipated enrollment, but may apply closer to the start of the semester and still be considered for admission. Applying in further advance may allow students to register for courses earlier.

**How to Apply.** Apply online at <https://fireup.cmich.edu/apply/>. If you are unable to access the application online, contact us at (989) 774-3076 or by email at [cmuadmissions@cmich.edu](mailto:cmuadmissions@cmich.edu).

- Complete the application for admission and submit the \$40 application fee (or a qualifying waiver).
- Submit an official transcript from each college you have attended to the CMU Admissions Office directly from the issuing school.
- If you have earned fewer than 24 semester hours of college-level academic credit at the time of application, you must also submit your official high school transcript or equivalent.

**Transfer of Credit.** Your courses from other regionally accredited colleges will be considered for transfer credit if they are relevant to a program at Central. We encourage you to review the Transfer Credit Policy section of the Undergraduate Bulletin (see index for page number). At least sixty academic hours of your bachelor degree requirements must be earned at a fully accredited four-year, degree-granting institution like Central Michigan University.

**Transfer Credit Evaluation.** Admitted transfer students are required to submit official transcripts directly from all previous colleges attended, preferably at least one month in advance of their scheduled orientation. Courses and credits from institutions not declared on the application for admission will not be allowed on a Central Michigan University degree program. Willful failure to list all colleges or universities you have attended or are attending at time of application may result in revocation of your admissions application and/or dismissal from CMU.

Your Transfer Credit Evaluation showing transfer of credit and Central Michigan course numbers and equivalencies will be provided prior to registration at the required orientation and advisement program.

If transcripts are not submitted early, delays in processing Transfer Credit Evaluations may be unavoidable. Students may also access the website (<https://admissions.cmich.edu/whatwilltransfer>) to review how courses transfer from other colleges and universities.

## College Transfer Agreements

A person who transfers from another accredited institution within the United States with a transcript which documents as having satisfied the MACRAO or Michigan Transfer Agreement (MTA), or a statewide transfer agreement, or completed an Associate of Arts or Associate of Science, or completed an Associate Degree in an applied or professional discipline (disciplines must be germane to a program at CMU), will also have satisfied the University Program portion of the General Education Requirements section at CMU. All other students may refer to the General Education Requirements in this Bulletin for guidelines on the applicability of their transfer credit toward University Program requirements. See Undergraduate Transfer Credit Policy for additional information.

(continued)

## Returning Undergraduate Students

Students who previously completed coursework through Central Michigan University, discontinued enrollment, and are now returning for additional classes are encouraged to work with Academic Advising to determine their best course of action.

Students who left in good academic standing and are now returning for additional classes three (3) or more years after their last semester of enrollment at Central Michigan University must submit a new application for admission. An application fee is not required, but students must submit official transcripts from any other school attended while away from CMU. Students who were academically suspended or dismissed from CMU must follow the rearticulation process before being eligible to enroll. See Undergraduate Academic Probation, Suspension, Dismissal, and Rearticulation Policies and Procedures for more information.

Students who previously completed coursework through Central Michigan University and plan to return for additional classes after fewer than three (3) years since their last semester of enrollment at CMU should contact the IT Help Desk at 989-774-3662 or [helpdesk@cmich.edu](mailto:helpdesk@cmich.edu) to have their CMU student account reactivated and Academic Advising at 989-774-7506 or [advising@cmich.edu](mailto:advising@cmich.edu) to schedule an appointment with an academic advisor to review their degree plan.

## Non-Degree Guest Admission

**Admission Requirements.** If you are a student who is regularly matriculated at an accredited college or university and in good academic standing, you may be admitted as a guest. A guest student is urged to have the courses that they plan to take approved in advance by the home institution to which the student plans to transfer the CMU credits. A guest student must have at least a C average in college-level courses at the home institution. Guest admission is valid for only one university semester or session at a time. Guest applicants who have completed fewer than 30 semester hours at the time of application may be requested to provide additional evidence of academic readiness.

**When to Apply.** You should apply well in advance and at least one month prior to the start of classes.

**How to Apply.** Apply online at <https://fireup.cmich.edu/apply/>. If you are unable to access the application online, contact us at (989) 774-3076 or by email at [cmuadmissions@cmich.edu](mailto:cmuadmissions@cmich.edu). If you wish to register as a guest in more than one semester or session, you must submit a new guest application for each session during which you wish to take courses.

## Auditing Courses

A CMU student interested in taking an undergraduate course on an audit basis must obtain, prior to registration, the approval of the department chairperson offering the course. An Approval to Audit Request Card, signed by the student and the department chairperson, must be filed in the Registrar's Office or Student Services Court by Friday of the third week of class.

No credit is granted for a course being audited, but such credit as the course normally would carry is included as part of the student's total load, and fees are assessed accordingly. No change from regular registration to audit, or from audit to regular registration is permitted after the published deadlines.

The student's responsibility to the class being audited is determined by the department chairperson and the instructor of the class. See *Auditing a Course* in the Index for information about fees.

## Non-Degree Special Admission

**Admission Requirements.** If you hold a bachelor or higher degree from an accredited college or university, you may be admitted to the university as a non-degree special student upon presentation of credentials showing that you hold such a degree or degrees. If you are 21 years of age or older and you are unable to furnish the usual admission credentials, you may be admitted as a non-degree special student with the permission of the Director of Admissions. Before a non-degree special student can qualify for a degree or certificate from this university, you must have met the requirements for regular admission.

**When to Apply.** You should apply well in advance and at least two weeks prior to the start of classes.

**How to Apply.** Apply online at <https://fireup.cmich.edu/apply/>. If you are unable to access the application online, contact us at (989) 774-3076 or by email at [cmuadmissions@cmich.edu](mailto:cmuadmissions@cmich.edu). Students should select non-degree status on the application.

## Dual High School Enrollment

Prior to your graduation from high school, you may be admitted as a non-degree high school concurrent student. This admission allows students to extend, enrich, and broaden their educational experiences while completing high school requirements.

**Admission Requirements.** Interested students should have at least junior standing. Occasionally special exceptions are made by the Director of Admissions. Your high school record to date must satisfy the requirements for admission to Central Michigan University as a new freshman. A recommendation from your high school counselor is required.

**When to Apply.** You should complete an application well in advance and at least one month prior to the start of classes.

**How to Apply.** You will need to complete the process described in the Freshman Admission section.

## Senior Citizen Program

CMU offers a program allowing Senior Citizens who are at least 60 years of age, prior to the start of the semester in which they are enrolling to register for on-campus undergraduate classes on an audit basis. There will be no charge for tuition or other course fees. Enrollment is based on space availability in the course(s) and with the approval of the instructor. Contact the Registrar's Office, Warriner 212, 989-774-3261 for further information.

## Undergraduate Certificates

Any currently enrolled undergraduate degree-seeking student is eligible to enroll in any undergraduate certificate program, but a certificate is not automatically earned by completing the requirements of a degree program, general education, major or minor. Students should consult with a departmental/unit advisor.

Non-degree seeking students must meet the existing admission standards to the University for Non-degree Special Admission. The student must consult with a departmental/unit advisor. The certificate will be noted on the transcript upon completion of the certificate program.

For more information, see *Undergraduate Certificates* in the Index.



## International Student Admission

Central Michigan University welcomes applications from international students. Students interested in admission for undergraduate study should complete the application for admission online at (<https://fireup.cmich.edu/apply/>). All other required documents should be sent directly to the Admissions Office for processing at least 3 months prior to the intended semester of enrollment.

Upon admission to CMU and when proof of financial support has been received, the Office of Graduate & International Recruitment will issue a Form I-20 to qualified students. The Office of Global Engagement will reach out to students to assist them in acquiring a student visa and arriving to campus. For more information on immigration requirements and regulations, please visit the Office of Global Engagement's [webpage](#).

### University Admission for Undergraduate Studies

**When to Apply:** You should apply as soon as possible, with a preference for at least six months in advance of anticipated enrollment. All other required documents should be sent directly to the Admissions Office for processing at least three months prior to the intended semester of enrollment.

**How to Apply:** Apply online at <https://fireup.cmich.edu/apply/>. If you are unable to access the application online, contact us at (989) 774-3076 or by email at [cmuadmissions@cmich.edu](mailto:cmuadmissions@cmich.edu).

- Complete and submit the International Student Application for Admission with the \$40 application fee (credit card, check or money order written from a U.S. bank).
- Submit official transcripts from all secondary and post-secondary institutions attended with English translations, if necessary.
- Prospective international students who are not citizens or permanent residents of a TOEFL-exempt country must demonstrate proficiency in English. A list of [TOEFL-exempt countries](#) is available on the International Recruitment website.

Prospective students may demonstrate proficiency by any one of the following methods:

- Test of English as a Foreign Language (TOEFL) score of 550 PBT/79 IBT.
- International English Language Testing System (IELTS) score of 6.5.
- Pearson Test of English (PTE) score of 53.
- Michigan English Test (MET) score of 52.
- International Baccalaureate (IB) grade of 5 in English at the Higher Level.
- Advanced Placement (AP) score of 4 on the English Language or English Literature Exams.
- General Certificate of Secondary Education (GCSE) or General Certificate of Education (GSE) score of A or B on the English Language Exam.
- SAT Evidence-based Reading and Writing (EBRW) score of 520 or ACT English score of 21.
- ELS Language Center Program: Completion of Level 112 for regular admission.
- Graduate of a U.S. high school with at least three years of attendance.
- Completion of courses that meet CMU's requirements for Oral English (i.e. COM 101) and Writing Competency (i.e. ENG 101/103 and ENG 201).
- Successful completion of a course of study (e.g. high school diploma, associate degree, baccalaureate degree) at a recognized institution where the language of instruction is English.
- Successful completion of 24+ graded, academic, postsecondary credits with a GPA of 2.50 at a recognized institution where the institution's language of instruction is English.

Test scores are valid for two (2) years from the test date. When tests provide "best scores" in specific areas, CMU will use the composite score generated by using the highest from each section.

Students who believe that they can demonstrate proficiency by means other than those listed should contact the International Outreach and Recruitment Office for individual consideration.

## Graduate Admission

Graduate programs and admissions policies appear in the Graduate Bulletin and at <https://www.cmich.edu/offices-departments/office-research-graduate-studies/graduate-studies>. Students interested in graduate programs are encouraged to contact Graduate Student Services at 260 Foust Hall, by email at [grad@cmich.edu](mailto:grad@cmich.edu), or 989-774-4723.

### Accelerated Master's Degree Program

The Accelerated Master's Degree Program (AMDP) allows CMU undergraduate students who possess a strong academic background and are maintaining a "B" average in their undergraduate coursework to apply typically as juniors to specific graduate programs that offer an AMDP. Students with less than a "B" average may apply to the AMDP, but they should submit information as to why they believe they can be successful in graduate level coursework. An AMDP allows students to reduce the total number of credits required to complete their undergraduate and graduate degrees by applying no more than 50% of the graduate program (500- and 600-level courses), at the discretion of the department, toward graduation requirements on both degree programs. Generally, courses required on the undergraduate major may not be counted on the graduate program. Students must enroll for the courses at the undergraduate level and may not be enrolled in more than 15 credit hours (UG and graduate level combined) per semester. The courses will be added to the graduate level once they are satisfactorily completed. Not all graduate programs offer the Accelerated Master's Degree Program. Check the Graduate Studies website for the most recent list of Accelerated Master's Degree Program.

**Admission Procedures.** Each program will determine admission criteria to any Accelerated Master's Degree Program (AMDP) which will be at least as rigorous as the admission requirements to the department's master's program. Generally, students will apply during their junior year for admission into the AMDP to begin the first semester of their senior year. To seek approval to enroll in an AMDP students should 1) submit an online admission application to be an Accelerated Masters student and 2) complete and submit the Accelerated Master's Degree Program Application and Credit Approvals found on the [website](#). If approved for admission, students must earn at least a "B" (3.0) in each course that applies to the graduate degree. Upon successful completion of the baccalaureate degree, students must contact the Office of the Registrar to have the credits on the Credit Approval Form moved from the undergraduate record to the graduate record. AMDP student grades will be monitored by Graduate Studies and any student who does not earn a "B" in each course that applies to the graduate degree will be removed from the AMDP. Students removed from the AMDP must apply for readmission into the master's program. If removed from the AMDP, the completed courses may still be used at the undergraduate level, but cannot subsequently be used at a graduate level. (Academic Senate, 2/27/18)

If you are admitted to an AMDP, your financial aid may be affected. Contact the Office of Scholarships and Financial Aid for information (989-774-3674) or [cmuosfa@cmich.edu](mailto:cmuosfa@cmich.edu).



# » New Student Orientation

## Orientation for Students admitted to CMU Online

Upon admission to Central Michigan University, completion of our online orientation is recommended for new students. Orientation will introduce students to university processes and policies, important resources, and other helpful information, setting students up for success. There is no fee for completing this online orientation.

## New Student Orientation for Freshmen and Transfer Students Coming to Main Campus

If you are a new freshman or transfer student, you are required to attend a new student orientation and advisement program prior to the start of your first semester. Detailed information for scheduling an orientation session is mailed to newly admitted students. Orientation takes place during the summer for the fall semester and in late fall for the spring semester.

During orientation you will connect with classmates and current CMU students, and meet academic advisors, faculty, and other CMU staff who are here to support you every step of the way. You'll be introduced to academic requirements and campus resources to set you up for success and learn about life as a student at CMU. Together with an academic advisor, you'll discuss your academic program of study and register for your first semester schedule.

Upon admission to Central Michigan University, detailed information regarding scheduling your orientation session will be mailed to you. Main campus students are required to submit the \$175 enrollment reservation deposit and then select an orientation date that best fits your schedule.

### What will new students learn at orientation?

At orientation, students will have the opportunity to:

- Connect with classmates and current students and learn about life as a CMU student.
- Engage with academic advisors and other university staff to begin making important and helpful connections on campus.
- Meet with faculty from academic colleges to learn more about specific majors.
- Learn about university resources and ways to get involved.
- Register for first semester schedule.

### Campus Life 101 orientation for new students

Prior to the start of the fall semester, new students complete a series of programs to become acclimated to campus life at CMU. Students will learn about university policies, the value of embracing diverse experiences and developing healthy relationships, and the importance of creating a safe, respectful, and inclusive community for everyone.

Details about Campus Life 101 will be communicated in August near the start of the semester.

## Family Central

### Family Orientation

At CMU we believe that family is central to students' experiences and their success. We welcome parents and supporters to attend orientation with their student and have designed a dedicated family program focused on supporting them every step of the way. Students can add parents/supporters when they register for their orientation session or by contacting the Orientation Office ([orientation@cmich.edu](mailto:orientation@cmich.edu)).

### Parent and Family Services

We believe that parents and supporters are an integral part of our community and partners in the success of their students. Parent and Family Services serves as a liaison between parents and the university. We answer questions and concerns, provide information, and coordinate activities to engage and serve families in positive and supportive ways.

Visit <https://www.cmich.edu/ess/oss/familycentral/Pages/default.aspx> for more information and opportunities for parents and supporters.

# Registration «

## The Registrar's Office

Warriner Hall 212; 989-774-3261  
Email: [registrar@cmich.edu](mailto:registrar@cmich.edu)

The Registrar's Office is committed to using both professionalism and the highest level of technology to provide efficient and effective services while still maintaining personal attention as a top priority. The Registrar's Office assists the Mission and Vision of Central Michigan University through ensuring the integrity of student records, collaboration with Strategic Enrollment Management initiatives, policy and procedure interpretation and enforcement and providing data and perspective to both internal and external constituents. The Registrar's Office provides a continuum of services throughout a student's academic life cycle and into alumni status.

Primary services provided include: academic record creation and maintenance, ensuring compliance with the Family Educational Rights & Privacy Act (FERPA), enrollment verification, providing transcript evaluation, NCAA eligibility verification, final graduation audits for conferral of credentials, overseeing term course registration activities, oversight of academic scheduling and space assignments, data mining and limited analytics and support to campus stakeholders in the creation, modification and implementation of student affiliated policies and procedures as applicable.

## Dates and Procedures.

Information regarding dates and procedures for on-campus registration for a particular semester or session is published online by the Registrar's Office at <https://www.cmich.edu/offices-departments/registrars-office>. Central Michigan University offers the earliest registration appointment times to all active military personnel, certified veterans and those deemed eligible for VA benefits by the Dept. Veteran Affairs. Central Michigan University also reserves the right to permit other approved student populations earlier registration appointment times as designated. Military Veterans will receive earliest Priority Date based on their official course registration date and class availability.

The academic year at CMU is divided into the following sessions: two semesters of sixteen weeks each and two summer sessions of six weeks each with concurrent three-week and twelve-week sessions. For opening dates, see the university calendar at the front of this Bulletin.

## Change of Registration (Drop/Add)

Courses may be added or dropped using [Course Search and Registration](#). For information on registration, drop, add, and withdrawal deadlines, please visit the calendars page on the Registrar's Office's website.

## Drop and Withdrawal Policy for Online Courses

For CMU Online classes, registration, drop and withdrawal dates, see <https://www.cmich.edu/admissions-aid/global-campus/course-drop-and-withdrawal-information>.

All CMU Online courses start on a Monday and end on a Friday. Students are encouraged to frequently and consistently log into their online course, ideally every day. Tuition refunds requested prior to the start date of the course shall be made in full. The start time for CMU Online courses is 12:01 a.m. EST on the first day of class. Drop/withdrawal requests received after that will be assessed a \$50 fee. Each new week for an online class begins on Monday at 12:01 a.m. EST and ends on the following Sunday at 12:00 midnight EST. The amount of tuition refunded is based on the week the request is received within. Holidays do not have any effect on this definition of a week. Students may not withdraw after the midpoint of the course.

Students who cease/fail to attend (virtual or otherwise) and have not formally withdrawn from the course will receive a grade of "E." A charge-back for financial aid may be incurred based on student's last date of academic participation in the class. See Scholarships and Financial Aid section of this Bulletin for additional information.

## Transfer Credit Evaluation

This area of the Registrar's Office evaluates transcripts for undergraduate transfer credit. Students may contact the Assistant Registrar-Transfer Credit if they have questions regarding their transfer credit evaluation. Transferability of coursework from all Michigan Community Colleges as well as many other colleges and universities can be viewed at <https://netconnect.cmich.edu/whatwilltransfer>.

## Minimum Class Enrollment

The university reserves the right to cancel any class in which too few students enroll.

## Enrollment at Other Institutions

A matriculated CMU undergraduate student who has completed coursework at another college or university since his or her last enrollment at CMU must request that an official transcript be sent to the CMU Registrar's Office as soon as the course has been completed. Electronic official transcripts can be sent from the institutions to [apply@cmich.edu](mailto:apply@cmich.edu). Refer to the Transfer Credit Policy in the Academic Policies and Procedures Section of this Bulletin.

## » Academic Planning & Support

### Beginning Your Studies

**Making Choices as a Student.** You have many academic decisions to make – choosing your program and enrolling in courses that lead toward your degree. Students enrolled on the Mt. Pleasant campus are required to declare a major, or sign a statement of intent to major, by the time they earn 56 credit hours. For students who are exploring majors, the CMU University Program portion of the General Education Requirements provides exposure to many areas of study. The University Program is required of all students and is explained later in this Bulletin. While taking University Program classes, you receive a well-rounded educational experience, while fulfilling needed General Education Requirements for graduation.

### Academic Schedule

Academic programs and course offerings at CMU are in a constant process of change and revision in response to advancements in knowledge, and to changing student needs and societal demands. In accordance with this process, academic programs and courses may be changed, deleted, or rescheduled. The time you will need to complete a degree depends on a number of areas: the academic load you will carry, whether or not you will attend summer sessions, and utilizing campus resources and services. You may complete a bachelor's degree in less than four years or it may take you longer. Conditions producing high demand for certain courses and programs where resources are limited may require some students to take more than the estimated minimum amount of time to complete their programs. There may also be special requirements for certain degrees as well as major and minor programs.

You are urged to discuss your progress toward a degree periodically with your academic advisor as you continue your program of study at CMU.

### Progress Toward Your Degree

Making use of academic advising and other services available on campus is strongly recommended. Academic advisors can help you clarify your plans, as well as help you plan the most efficient route toward your degree. You can also check your own progress on your Degree Progress at <https://www.cmich.edu/centrallink>. It is still important to see your advisor for assistance and verification of your progress.

### Academic Load

The following is a typical academic load for a CMU undergraduate:

Semester/Session	Typical Academic Load
• Fall Semester	14 -18
• Spring Semester	14 -18
• 3 weeks of Summer Session	3
• 6 weeks of Summer Session	5-7
• 12 weeks of Summer Session	12-14

A degree requires a minimum of 120 hours of credit. Some degrees and majors have minimums above 120. In order to graduate within four years with a degree, a student must average at least 30 hours of credit each year.

Abilities and circumstances of students vary greatly. Each student should carefully weigh these factors when deciding the number of hours to carry during a semester or session as well as the length of time to be expended in fulfilling requirements for a degree. Some students will carry lighter loads and take longer to fulfill the requirements. As a guideline, freshmen are advised to take no more than 15 hours of credit during the first semester on campus.

No undergraduate student will be permitted to be enrolled in more than 21 credits per semester. Exceptions may be granted with approval of the dean or dean's designee.

**CMU Online:** No undergraduate student will be permitted to be enrolled in more than 21 credits during any of the following periods:

- Spring (January-May)
- Summer (May-August)
- Fall (August-December)

**Senate Policy:** Amended on 4/22/03 to include restriction to 21 credits per semester. Editorially amended 3/21/18 to change minimum hours to 120 and annual average to 30 for Senate-approved degrees with 120 minimum hours.

## First Year (Freshman) (0-25 credit hours)

Meet with your Academic Advisor during your first semester to clarify requirements on the University Program, competencies, or any other questions you have encountered since academic orientation. They can assist you with your transition to campus and help you put successful strategies and goals in place.

At CMU, several advising services, classes, and self-assessment instruments are available to assist you in your academic and career decision making. Some suggestions include:

- Talking to CMU advisors in academic departments, Academic Advising and Academic Assistance, or the Career Development Center regarding academic programs that interest you.
- Considering taking CED 101 (1 credit) *Career and Self Exploration*.
- Participating in various self assessment exercises designed to match your interests and abilities with academic and career opportunities. CMU offers the following personalized and computerized self assessment exercises: Focus Program and Strong Interest Inventory (see the Career Development Center website: [www.careers.cmich.edu](http://www.careers.cmich.edu)).

*Keep these in mind if you are pursuing one of the programs:*

### Business:

- Contact *Business Student Services* (Grawn Hall 105, 989-774-3124) for information regarding the College of Business Administration or to schedule a meeting with a business advisor. <https://www.cmich.edu/colleges/cba/students/services/Pages/default.aspx>

### The Arts and Media (Art and Design; Communication, Journalism, and Media; Music; Theatre and Dance):

- Call 989-774-7506.

### Health Professions:

- Contact the College of Health Professions Student Service Center, 989-774-2315.

### Liberal Arts and Social Sciences (English Language and Literature; History, World Languages, and Cultures; Military Science; Philosophy, Anthropology, and Religion; Politics, Society, Justice, and Public Service; Psychology:

- Call 989-774-7506.

### Pre-professional Studies (pre-law, pre-med, etc.):

- Talk with the appropriate pre-professional advisor (see index for more information).

### Teaching:

- Visit the *EHS Office of Educator Preparation Programs*, EHS 421, to learn more about teacher education programs and schedule a meeting with a teacher education academic advisor. Website: [www.ehs.cmich.edu/css](http://www.ehs.cmich.edu/css); phone: 989-774-3309.

### Science, Technology, Engineering, or Mathematics:

- Contact *College of Science and Engineering Student Services* (989-774-7506; [https://www.cmich.edu/colleges/se/CSE Student Success Center](https://www.cmich.edu/colleges/se/CSE%20Student%20Success%20Center))

## Second Year (Sophomore) (26-55 credit hours)

- Continue your search for a major and/or minor.
- If you have decided on your major and/or minor, consult with the appropriate departmental advisor(s) to declare the major/minor and define requirements for graduation.
- Continue coursework on the *University Program*, competencies, and major/minor. Most competency requirements must be completed by 56 credit hours. Review your progress on completion of the *University Program* and competency requirements with your academic advisor.
- Search for a study abroad or an internship opportunity by contacting CMU's *Office of Global Engagement* (Ronan Hall 330, 989-774-4308) or an internship coordinator in the *Career Development Center* (Ronan Hall 250, 989-774-3068). Your academic department of choice may also have advice for you.

*Keep these in mind if you are pursuing one of the programs:*

### Teaching:

- Follow the procedures for admission to the Teacher Education Program.
- Schedule an appointment with your academic advisor.
- Visit the *EHS Office of Educator Preparation Programs* website at [www.ehs.cmich.edu/css](http://www.ehs.cmich.edu/css) for admission information.

### Business:

- Complete the requirements for admission to the *College of Business Administration* outlined in the *Undergraduate Bulletin*.
- Meet with a CBA advisor in Grawn Hall 105, 989-774-3124; <http://students.cba.cmich.edu/>.

### Science, Technology, Engineering, Mathematics:

- Meet with a CS&E advisor for information about majors and programs. (989-774-7506; [https://www.cmich.edu/colleges/se/CSE Student Success Center/](https://www.cmich.edu/colleges/se/CSE%20Student%20Success%20Center/))

## Third Year (Junior) (56-85 credit hours)

- Declare your major and/or minor in the appropriate department(s) if you have not done so.
- Once you have declared your major and/or minor, schedule an advising appointment with the academic advisor in the college of your major. This person will review your individual courses and determine remaining degree requirements.
- Register with the *Career Development Center* (Ronan Hall 250, 989-774-3068)
- Apply for admission into an Accelerated Master's Degree Program if applicable.

*Keep these in mind if you are pursuing one of the programs below:*

### Teaching:

- If you have completed Cycle I, and if you plan to student teach during the following fall semester, apply for student teaching in January (see *Standards Leading to Teacher Certification* in the Index for page number).
- Follow the procedures for admission to the Teacher Education Program.
- Schedule an appointment with your academic advisor.
- Visit the *EHS Office of Educator Preparation Programs* website at [www.ehs.cmich.edu/css](http://www.ehs.cmich.edu/css) for admission information.

## Fourth Year (Senior) (86-120 credit hours)

- Once you have earned 86 credit hours, apply for graduation through Degree Progress or the Registrar's website. Questions about graduation can be addressed by the Registrar's Office.
- Complete graduation requirements as indicated on your Graduation Audit. Develop skills for your job search at the *Career Development Center* (Ronan Hall 250, 989-774-3068). Skill development workshops and information are available regarding job search techniques, interviewing skills, and portfolio development.
- If you are interested in attending graduate school, you should talk to faculty members in the field you would like to pursue. They will have information on how to go about selecting, applying to, and preparing for graduate school. You may also contact Graduate Studies for information on all graduate programs available at CMU by visiting [www.grad.cmich.edu](http://www.grad.cmich.edu), sending an e-mail to [grad@cmich.edu](mailto:grad@cmich.edu), calling 989-774-1708, or visiting Graduate Student Services in Foust 100.

## Special Notes for Transfer Students:

- During your first semester, check with the Registrar's Office to be sure that a final transcript from each of your previous colleges is on file.
- If you have questions following orientation, meet with a general academic advisor or college advisor to review your transfer credit evaluation, University Program and competency requirements.
- Review the above steps to verify your progress toward completion of all CMU degree requirements.



## Academic Support

Central Michigan University's comprehensive advising and counseling services offer an important resource for all undergraduate students. Academic advisors make every effort to familiarize students with university requirements, career, academic information, and helping them find success strategies and skills. Students with emotional or personal concerns have opportunities to work with professional counselors (see Counseling Center for more information). Using these support services is easy, convenient and critical to success.

### Office of Student Success

230 Ronan Hall  
989-774-3401  
[oss@cmich.edu](mailto:oss@cmich.edu)

The team in the Office of Student Success provides students with support from the start of their CMU journey through graduation. The office includes the following services:

- New Student Orientation and Parent and Family Services  
(See Index for page number)
- Academic Advising
- Academic Support (Tutoring and Supplemental Instruction)
- MI GEAR UP Program
- Pathways to Academic Student Success
- CMU TRIO Detroit

For more information, see <https://www.cmich.edu/ess/oss/Pages/default.aspx>

### Academic Advising

250 Ronan Hall 250; 989-774-7506; [advising@cmich.edu](mailto:advising@cmich.edu)

#### Your Academic Advisor

All CMU students receive personalized advising and academic coaching from their academic advisor, and you will cover areas such as course selection during new student orientation and beyond, degree planning, as well discussing your academic and personal success strategies. Each student is assigned an academic advisor as a new student based on academic area of interest and students can connect with their advisor by using the Advisor tab in their Degree Progress, or by contacting Academic Advising at 989-774-7506 or [advising@cmich.edu](mailto:advising@cmich.edu).

When you are ready to consider a major, your academic advisor can assist you in scheduling an appointment with a faculty advisor in the department teaching courses of interest to you. You may want to visit with faculty in several departments, but once you select a major, you will be assigned a faculty advisor in that department.

### Academic Support

Ronan 250; 989-774-7506; [advising@cmich.edu](mailto:advising@cmich.edu)

Academic support is available to all students and is offered in a variety of services:

#### Tutoring

Tutoring is available for undergraduate students who need assistance in understanding course material. Students experiencing difficulty in any undergraduate math class may obtain assistance at one of the walk-in Math Assistance Centers. The Writing Centers specialize in helping students with all types of writing. Undergraduate students seeking assistance in most other subjects can request a one-on-one or small group tutor from the Tutoring office in Academic Support, Ronan Hall 250. **Note:** Tutoring is not available to main campus students for most online classes.

### Supplemental Instruction

Supplemental Instruction is provided for students enrolled in courses which have historically proved difficult. Supplemental Instruction (SI) is comprised of a series of review sessions conducted by an SI Leader who prepares a review for each lecture given by the professor.

### MI GEAR UP Program

343 Ronan Hall; 989-774-1585; [gearup@cmich.edu](mailto:gearup@cmich.edu)

MI GEAR UP (Michigan Gaining Early Awareness & Readiness for Undergraduate Programs) is a grant funded program at Central Michigan University designed to significantly increase the number of low-income students who are prepared to enter and succeed in postsecondary education. It is funded by the Michigan Department of Talent and Economic Development, King-Chavez-Parks (KCP) Initiative. The pre-college program facilitates student tutoring, mentoring, and offers workshops on college preparation, and financial aid. It also assists schools and teachers to better prepare middle and high school students for college studies. The MI GEAR UP grant serves over 800 students in four schools. MI GEAR UP coordinates with CMU departments to provide on campus experiences for project students. CMU students gain valuable mentoring, volunteer and hands-on experience working with MI GEAR UP student programs.

### Pathways to Academic Student Success

343 Ronan Hall; 989-774-3630; [4spathways@cmich.edu](mailto:4spathways@cmich.edu)

Pathways (Pathways to Academic Student Success) is a grant funded program at Central Michigan University designed to increase the retention and graduation rates of first generation and Pell grant eligible students. It is funded by the King-Chavez-Parks Initiative Michigan Department of Talent and Economic Development. The program will serve a cohort of 150 low-income and/or first generation CMU students each year with the goal of achieving increased grade point averages, advancement of academic standing, increased acceptance into majors and increased graduation rates. Pathways coordinates with campus partners to provide academic guidance, leadership development and mentoring.

### CMU TRIO Detroit

CMU TRIO Detroit Pre-College Programs serve over 600 students annually who are first generation, low-income students within the TRIO Upward Bound and Talent Search Projects. The projects are federally funded programs through the U.S. Department of Education that are committed to providing students with college access programming and leveraging the educational field for the students we serve. The project's motto is "Where Preparation Meets Opportunity!" We strive to give each student opportunities to allow them to be prepared for every opportunity and assist them in their ambitions toward a college education. CMU is the host institution to both projects. Contact information: [cmutriodetroit@cmich.edu](mailto:cmutriodetroit@cmich.edu)

### TRIO Upward Bound

Upward Bound provides fundamental support to participants in their preparation for college entrance. The program provides opportunities for participants to succeed in their precollege performance and ultimately in their higher education pursuits. Upward Bound serves: high school students from low-income families; and first-generation high school students. The goal of Upward Bound is to increase the rate at which participants complete secondary education and enroll in and graduate from institutions of postsecondary education.

### TRIO Talent Search

Talent Search identifies and assists individuals who have the potential to succeed in higher education. The program provides academic, career, and financial counseling to its participants and encourages them to graduate from high school and continue on to and complete their postsecondary education. Talent Search serves middle school through high school students and encourages persons who have not completed education programs at the secondary or postsecondary level to enter or reenter and complete postsecondary education. The goal of Talent Search is to increase the number of youth from disadvantaged backgrounds who complete high school and enroll in and complete their postsecondary education.

## Additional Departmental Advising

### Faculty Advising

When students are ready to consider a major or minor program, it is recommended that an appointment be made with a faculty advisor in the department teaching courses of interest. Students may want to visit with faculty in several departments before making a decision. Once a major/minor is selected, a faculty advisor is assigned by the academic department.

### Transfer Credit Evaluation

This area of the Registrar's Office receives and reviews transcripts for evaluation of undergraduate transfer credit. Students may schedule an appointment with the Assistant Registrar if they have questions regarding transfer credit. Transferability of coursework from Michigan community colleges as well as partial listings from other colleges and universities can be viewed at <https://www.cmich.edu/ess/registrar/RegistrarTransferCreditEquivalency/Pages/default.aspx>. Students planning to complete coursework at colleges not listed should check with this office in advance by emailing course information to [registrar@cmich.edu](mailto:registrar@cmich.edu).

### Graduation Audit

During the semester or session in which students will complete 86 credit hours, an application for graduation should be submitted. Applications for graduation can be submitted online through Degree Progress or the Registrar's website. An official graduation audit indicating remaining requirements for your degree will be e-mailed to students.

Applications are processed in the order they are received for each graduation. For further information including submission deadlines, refer to *Requirements for Graduation* in this Bulletin.

## Testing & Diagnostic Services

**Center for Community Counseling and Development.** The Center for Community Counseling and Development provides counseling and assessment services for community residents, area schools, and Central Michigan University students. Advanced graduate students in counseling ordinarily perform these services under the supervision of the counselor education faculty members. Among the services provided are: individual counseling for children, adolescents and adults; family and couples counseling; play therapy for children; general counseling for emotional problems and life adjustment concerns; career and employment counseling; referral help in finding appropriate services for identified problems; and consultation with community agencies and schools. In addition to serving the needs of referrals during the school year, the Center for Community Counseling and Development provides counseling and consultative services during the summer months. The clinic is administered by the Department of Counseling, Educational Leadership, and Higher Education (989-774-3532; EHS 322).

**Psychological Training & Consultation Center (PTCC).** The PTCC is a CMU training clinic which offers low cost psychological services, including psychotherapy and psychological assessment, to CMU students, faculty, and staff, and community residents. Services are provided by CMU psychology graduate students who are training at the PTCC, and all services are supervised by Psychology Department faculty. In addition, speciality services are offered through the PTCC, including the Trauma and Anxiety Disorders Clinic, Neuropsychology Clinic, School Psychology Clinic, and Learning Acceleration Clinic. For further information about the PTCC or to request services, please call 989-774-3904.

**Speech, Language, and Hearing Clinics.** The Speech, Language and Hearing Clinics are operated by the Department of Communication Sciences & Disorders at CMU and at various ancillary facilities in the Central Michigan area. These clinics are part of the Carls Center for Clinical Care and Education. The clinics emphasize complete programs in evaluation, diagnosis, and rehabilitation of children and adults with communication disorders. The academic and clinical service programs in Audiology and Speech-Language Pathology are nationally recognized by full accreditation from the Council of Academic Accreditation of the American Speech-Language-Hearing Association. In addition, the Audiology program is the first in the USA to be nationally recognized by full accreditation from the Accreditation Commission for Audiology Education of the American Academy of Audiology.

Each summer, the Department of Communication Sciences & Disorders operates a five-week coeducational specialty program on campus for children and adolescents up to the age of 18 years, with speech, language, voice, fluency and hearing disorders. Participants receive approximately 60 hours of therapy at the Carls Center for Clinical Care and Education. Since its inception in 1946, this specialty clinic has served thousands of children with a wide range of communication disorders. Enrollment in this clinic is approximately 75 children each summer. The staff is comprised of university faculty; practicing speech, language, and hearing professionals; graduate students; and selected undergraduates.

The Department of Communication Sciences & Disorders offers students in Audiology and Speech-Language Pathology diverse clinical opportunities. Practicum experience may include medical care facilities, educational settings, preschool language programs, hospital clinics, voice clinics, otolaryngologists' offices, and adult work activity centers. Students completing the master's degree program in Speech-Language Pathology or the professional doctoral degree (Au.D.) in Audiology fulfill the academic and clinical requirements for the Certificate of Clinical Competence issued by the American Speech-Language-Hearing Association.

The Carls Center for Clinical Care and Education, Health Professions Building, 989-774-3904.

## Certified Testing Center

The Certified Testing Center, located in Park Library, provides testing services for students. This includes CLEP testing, testing for competencies, and graduate entrance examinations, as well as other tests. Call 989-774-1092 for additional information or visit the website at [https://www.cmich.edu/office\\_provost/CIS/Testing-Center/Pages/default.aspx](https://www.cmich.edu/office_provost/CIS/Testing-Center/Pages/default.aspx).

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## Career Development Center

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Ronan Hall 240  
989-774-3068

The primary goals of the Career Development Center are to assist individuals in recognizing career development as a lifelong process and to develop decision-making and job search skills that are useful throughout life. Career development is an important element of an individual's sense of identity and personal happiness. Successful career development is dependent on two factors: self-knowledge and knowledge of the world of work. The likelihood of career success is increased dramatically when individuals invest incremental effort over a significant period of time. We believe you should continue the process of career exploration and selection during your first semester and throughout your CMU experience. By utilizing the Career Development Center, you will enhance your ability to make an informed career decision. All of us at CMU are committed to providing you with quality experiences and helping you prepare for your career.

### Support Services

**Career Coaching.** A professional staff member in the Career Development Center is available to advise students in all fields of study. You can schedule an appointment by visiting Handshake (<https://cmich.joinhandshake.com/stu/appointments/new>) to discuss career exploration, resumes, cover letters, networking, interviewing, the job search, graduate school and more! You are encouraged to communicate with a career coach throughout your CMU career beginning with your first semester. Frequent contacts will enhance the quality of your career development and increase your knowledge of resources and job market trends. Visit [www.careers.cmich.edu](http://www.careers.cmich.edu) for information on planning for career success.

**Resume Critiques.** The Career Development Center offers individual assistance in the development of this most critical tool.

**Mock Interview Program.** These are designed to provide an opportunity to practice your interviewing skills prior to actual scheduled interviews with employers. This practice interview is a session with an intern who is trained to provide feedback about verbal and nonverbal techniques.

**Log in to Handshake.** Search for Internships, employer partners, and on-campus Interviewing. Individuals who are actively pursuing professional employment or internship opportunities can find many resources by using Handshake. This system is available to undergraduates, graduating seniors, graduate students, and alumni.

**Career Assessments.** Try the free FOCUS2 assessment tool to help clarify your interests, values, skills, personality, education preferences and leisure time interests. Use this information as a basis for further discussions about your choice of major and future with a career coach, friends, and family members. Additionally, this tool can be used to research job titles that fit your personal profile. Also available through the Career Development Center, for a fee that can be charged to your student account, are the Myer's-Briggs Type Indicator (MBTI) and the Strong Interest Inventory (SII). You must make an appointment with a career coach to receive and discuss your results.

Visit <https://www.cmich.edu/offices-departments/career-development-center/students/career-assessments> to take an assessment, or learn more!

**Career Events.** There are numerous Career events held throughout the academic year. These events are focused on the following career-related activities:

*Career/Job Fairs  
Employer Spotlights  
Etiquette Dinners  
Networking 101 and Dress for Success Information Session  
And many more!*

Go to <https://cmich.joinhandshake.com> for a current list of Career Events (you will need a global ID).

# Financial Information «

## Student Account Services and University Billing

Central Michigan University  
Bovee University Center 119  
Mount Pleasant MI 48859  
989-774-3618  
Fax: 989-774-1452  
e-mail: [billing@cmich.edu](mailto:billing@cmich.edu)

Central Michigan University utilizes a centralized billing method to bill for all departments at CMU. The Student Account Services and University Billing Office is responsible for the billing and collection of student accounts. Each student has an account with the University that is identified by the student's Student Identification Number. This account includes all charges or payments made by the student or university.

### Billing Procedures and Delinquent Account Policy

Central Michigan University sends monthly billing statement notifications electronically to CMU global e-mail addresses. Students are responsible for accessing these monthly statements in the QuikPay Billing System via CentralLink to view their account balances and payment due dates. The monthly statements may include tuition, course fees, on-campus housing, bookstore, telecom, parking fees and other miscellaneous charges.

Students may incur late fees if the monthly balances are not paid by the scheduled due date. Financial holds will be placed on accounts with a past due balance, preventing course registration and release of transcripts and diplomas.

Visit [https://www2.cmich.edu/fas/fsr/student\\_acct\\_university\\_billing/Pages/Delinquent\\_Account\\_Policy.aspx](https://www2.cmich.edu/fas/fsr/student_acct_university_billing/Pages/Delinquent_Account_Policy.aspx) to view the current late fee policy.

Past due accounts may be referred to an outside collection agency, and, if referred, the account will be assessed collection fees of up to 28% which will be added to the student's account and becomes due immediately. Students will also be responsible for all court costs and attorney's fees to pursue the debt. Once the account is referred to a collection agency, the past due account may be reported to the Credit Bureaus by the collection agency. Students are encouraged to visit OneCentral on the lower level of the Bovee University Center to receive advice regarding financial options that could possibly prevent collection referral. Please be advised that CMU reserves the right to suspend campus ID privileges and charging privileges to the student account at any time due to a past due balance, including, but not limited to, meal plan, flex, computer lab, library, bookstore, SAC, and telecom. Any delinquencies from the University Apartments may result in the initiation of eviction proceedings. Students with delinquent accounts may have a prepayment hold placed on their account, requiring payment in full at the time of registration for all future semesters. In mitigating circumstances, students with unpaid financial obligations, acts of dishonesty or misconduct as determined by Central Michigan University, may be involuntarily withdrawn from classes by CMU Administration.

### Past Due Balance Drop Policy

Students registered for the new academic year with a past due balance of \$200.00 or greater will be removed from all registered courses on August 1. All students will receive prior notification of the possible registration removal after the July billing statements have been issued (approximately the first week in July). Students may be removed from their Spring and Summer semester courses as well if a past due balance is owed prior to the start of each semester. Students will receive an email notification at least 30 days prior to the removal date alerting them of the past due balance.

### Third-Party Payer

Tuition and fees are the responsibility of the student. If a third-party payer fails to make payment on behalf of a student, the student will be billed and held responsible for all appropriate tuition and fees, as well as all late fees waived pending the third-party payment.

### Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act of 1974 was established to protect the privacy of student records. CMU is, therefore, not allowed to release details of a student's financial account without prior written consent from the student. Authorization to Release Information forms, which will allow release of non-academic information to specific individuals, are available online at <https://www2.cmich.edu/ess/registrar/RegistrarRecords/Pages/Confidentiality.aspx>, on *CentralLink*. To see the policy, check the index for page number.

### Tuition and Fees

Tuition and fees are established by the Board of Trustees and are subject to possible change. Contact the Student Account Services and University Billing Office at 989-774-3618 for updated information, or see [https://www2.cmich.edu/fas/fsr/student\\_acct\\_university\\_billing/SASUBBillingandPaymentInformation/Pages/Tuition-and-Fee-Rates.aspx](https://www2.cmich.edu/fas/fsr/student_acct_university_billing/SASUBBillingandPaymentInformation/Pages/Tuition-and-Fee-Rates.aspx) for updates and for frequently asked questions about the upper/lower tuition model.

Tuition and fees for Registration are to be paid in full when billed. Any past due financial obligations must be paid prior to the time of registration. Registration will not be allowed until such obligations are met.

CMU has a convenient and affordable tuition payment plan. The payment plan is an interest-free way to help you pay for college. You can enroll online for this option, which allows you to have more flexibility with tuition payments. For more information, ask a Student Service Advisor located in Bovee University Center 119 or see [https://www2.cmich.edu/fas/fsr/student\\_acct\\_university\\_billing/SASUBCMUPaymentPlan/Pages/default.aspx](https://www2.cmich.edu/fas/fsr/student_acct_university_billing/SASUBCMUPaymentPlan/Pages/default.aspx). Fees are payable by check, money order, online by electronic check, American Express, Discover, Mastercard, or Visa. Students receive electronic statements from the CMU Student Account Services and University Billing office. Students are responsible for accessing their e-mail messages for monthly account balances and payment due dates on [https://www2.cmich.edu/fas/fsr/student\\_acct\\_university\\_billing/SASUBBillingandPaymentInformation/Pages/default.aspx](https://www2.cmich.edu/fas/fsr/student_acct_university_billing/SASUBBillingandPaymentInformation/Pages/default.aspx).



Tuition Rates* for On-Campus Courses		
Level of Courses	22-23 Rates Per Credit Hour*	
	U.S. Residents	Non-U.S. Residents
Undergraduate students:		
<i>New, Incoming, Lower Level</i>	440.00	800.00
<i>New, Incoming, Upper Level</i>	474.00	850.00
<i>Continuing Students</i>	469.00	800.00
Master's/Specialist:	726.00	925.00
Doctoral:	828.00	1,010.00

\*Tuition rates are set prior to the start of each academic year by the Board of Trustees.

### CMU Online Tuition (22-23)

The President or designee may vary these tuition rates and fees according to cohorts, programs, or terms of contracts. See <https://www.cmich.edu/admissions-aid/global-campus/tuition-fees>.

#### Undergraduate Courses:

<sup>1</sup> New, Incoming Students (lower level)	
<i>Standard</i> .....	\$440
<sup>2</sup> <i>Military</i> .....	299
<i>State of Michigan or Federal Employee</i> .....	374
<sup>1</sup> New, Incoming Students (Upper Level)	
<i>Standard</i> .....	474
<i>Military</i> .....	299
<i>State of Michigan or Federal Employee</i> .....	303
Continuing Students	
<i>Standard</i> .....	469
<i>Military Rate</i> .....	299
<i>State of Michigan or Federal Employee</i> .....	399

#### Graduate Courses:

Standard .....	\$726
Military .....	399
Federal or State of Michigan Employee.....	617
Educational & Professional Development .....	500
Disney - US Students .....	295
ERP Certificate using SAP Software.....	770
MBA Courses, <i>online or on campus</i> .....	770
MBA courses, <i>Active Military</i> .....	745
MS - Information Systems, <i>online or on campus</i> .....	745
MS-IS and MBA ERP fee for "S" Designator Courses.....	50
MEV, <i>online or on campus</i> .....	770
MS in Nutrition & Dietetics .....	682
Specialist in Education (Ed.S.) .....	726
<i>Military Rate</i> .....	399
Doctor of Education (Ed.D.).....	828
Doctor of Health Administration (DHA) .....	850
<i>Military Rate</i> .....	800
Doctor of Educational Technology (DET).....	828

#### Notes:

<sup>1</sup> Lower level = less than 56 credit hours; Upper level = 56 or more credit hours

<sup>2</sup> Military Rates are applicable to programs that do not exceed the standard undergraduate rates.

### Application Fees

- **Undergraduate:** \$40 to be submitted with the application.
- **Graduate:** \$50 to be submitted with the application.
- **Reinstatement:** \$35 to be submitted with the application form.

### Enrollment Reservation Deposit

Main campus students are required to submit the \$175 enrollment reservation deposit and then select an orientation date. CMU Online students are not charged a fee for completing online orientation

### Student Services Fee

The CMU Student Services Fee of \$225.00 includes mandatory assessments for student-facing services and initiatives designed and offered to promote student success for all CMU students (main campus, online, and satellite campuses). The fee applies to all students/programs except the following: individuals eligible for active duty military rate; College of Medicine students (based on current pricing structure; not on a per credit hour basis-CMED students enrolled in additional courses or certificates are required to pay the student services fee); Disney College Program students; high school/dual enrollment students; senior citizens auditing courses; individuals enrolled in non-credit Education and Professional Development (E&PD) courses and study abroad students who directly enroll at host institutions.

The most current University Fee Listing may be accessed at: <https://www2.cmich.edu/fas/fpb/Documents/FY22%20University%20Fee%20Listing%207.1.2021.pdf>.

### Non-Payment Tuition Charge

Payment for tuition must be received by the stated due date or the student will be assessed a \$100.00 Non-Payment Tuition Charge in addition to a monthly late fee.

### Returned Check Fee

A \$25.00 handling fee is charged for checks returned by the bank (i.e., insufficient funds, account closed) which were presented to the university. Students may be involuntarily withdrawn from all classes if returned checks intended to cover tuition and/or past-due balances are not repaid as directed in the Notice of Returned Check letter. This letter will be mailed/e-mailed from the university upon receipt of a returned check.

In addition, if payment is not received within 5 business days, CMU may pursue legal action, seek criminal prosecution and/or assign the account to a collection agency.

### Withdrawal Fee

**Effective Spring 2024** - A non-refundable \$50 withdrawal fee for each course will be assessed beginning on January 15, 2024. See the Registrar's website for more information. See also the policies on Withdrawing from a Class After Drop/Add Period and Withdrawals from all Classes.

### Auditing Course Fee

Students who attend classes but do not desire credit pay the same fees and are governed by the same regulations as students desiring credit. See *Auditing Courses* in the Index for more information about auditing courses.

### Special Course Fees

Many courses are approved for special course fees that must be paid in addition to tuition to cover costs of materials and services supplied to students. All courses with special fees will have the amount identified next to the course in the special fees column of each Course Search & Registration.

**Field Trips.** Expenses involving field trips in a class may be prorated among members of the class.

**Excess Materials.** Students using materials in excess of those furnished by the departments of Chemistry, Human Development and Family Studies, Engineering Technology, and Journalism will be charged for the cost of those materials.

**Flight Training.** Students enrolled in flight training courses will be charged for aircraft and instructor time at rates established by the flight school.

**Study Abroad Administrative Fee.** CMU students enrolling in a study or internship program abroad pay a \$150 administrative fee to the Office of Global Engagement. Students not currently enrolled at CMU pay a \$300 administrative fee.

### Credit by Examination Fee

The fee is \$40 per credit hour. See *Credit by Examination* in the Index for more information.

### Graduation Fee

- Undergraduate - No application fee.
- Graduate - Application for graduation fee is \$50.00 (per degree).

### Transcript Fees

In addition to a \$15 per order fee, the National Student Clearinghouse has processing fees depending on the method of delivery. Transcripts of students with financial obligations to the university are not released until the obligation is paid.

### Diploma Replacement Charge and Hold

\$25.00 - Bachelor's, Master's, and Specialist's degrees

\$35.00 - Doctoral degrees and Graduate Certificates

Diplomas of students with financial obligations to the university are not released until the obligation is paid.

### Library Fees

**Overdue reserve material:** Two-hour reserve materials: \$1.00 first hour, 25 cents each successive hour. Other reserve materials: \$1.00 first day, 50 cents each successive day.

### Housing Fees

**Residence Halls.** Various contracts are available depending on individual meal plans. Information regarding the plans, payment due dates, etc., can be found at [www.reslife.cmich.edu](http://www.reslife.cmich.edu).

**University Apartments.** Various contracts are available depending on the individual unit and number of bedrooms.

### Housing Application and Penalty Fees

- Meal Plan Changes (Assessed to cover costs): \$15.00
- Housing Contract Breakage - Contract breakage fees will be assessed according to the Cancellation of Housing Agreement section of this Bulletin (see Index).
- Lost Key Fee and Lock Change Fee
  - University Apartments: \$33.00-50.00; \$20 for US Mailbox key; \$20.00 for Graduate Housing fob
  - Residence Halls: \$50.00 - \$100.00

### Student Photo Identification Card

Students receive their photo identification card from the CentralCard office in the Bovee University Center Room 205. The first card is issued to the student at no charge. There will be a fee assessed for a replacement ID card due to loss or damage. Banking Services using the ID card are also available. For additional information, contact the Campus ID Office at 989-774-3484 or by visit the website at [https://www.cmich.edu/fas/ras/central\\_card/pages/centralcard.aspx](https://www.cmich.edu/fas/ras/central_card/pages/centralcard.aspx).

**Transfer of Campus ID Card.** For your protection, the only person authorized to use your card is you. There is a \$25 misuse fee if someone else is caught using your identification card.

### Health Services Fees

University Health Services charges fees for the services provided. Payment is not required on the date of the visit. Courtesy insurance billing is provided if the student presents proof of current coverage (insurance card or photocopy of it) and authorizes us to do so. University Health Services participates with a number of health insurance and prescription drug plans. Some fees are subject to change without notice. For current charges for specific services contact the Health Services Business Office, Foust 201D, 989-774-1897.

All charges incurred at University Health Services are billed directly by University Health Services and are NOT part of your Student Account Services and University billing statement. However, if the account

becomes uncollectible, and the patient has an active account through University Billing, the charge will be transferred to that account, and at which time, will be subject to the CMU's delinquency policy. Please contact the University Health Services Business Office at 989-774-1897 if you have billing questions.

### Vehicle Registration Fee

- **Commuter:** \$175.00 per academic year
- **Resident:** \$150.00 per academic year

For Spring Semester, the charge is one-half the annual fee. For Summer Semester, the charge is one-fifth the annual fee. Further information can be found at <https://www.cmich.edu/about/campus-safety/cmu-police/parking-services>.

### Bicycle Registration

Bicycles must be registered and a free license affixed. Unregistered bicycles may be cited and impounded. Register online at <https://www.cmich.edu/about/campus-safety/cmu-police/parking-services>. We also accept City of Mount Pleasant and Union Township licenses. Bicycles must be locked to a bike rack. It is recommended to use a U-bolt style lock.

### Approximate Expenses

The following is presented below for planning purposes only, and is subject to possible changes. For graduate expenses consult the current Graduate Studies Bulletin. Note: Financial aid does not cover the Enrollment Reservation Deposit.

Expenses*	Per Semester	Per Year
Tuition		
New Incoming Lower Level (Resident)	\$6,375	\$12,750
New Incoming Lower Level (Non-Resident)	11,835	23,670
New Incoming Upper Level (Resident)	6,750	13,500
New Incoming Upper Level (Non-Resident)	12,225	24,450
Continuing Students (Resident)	6,675	13,350
Continuing Students (Non-Resident)	11,835	23,670
Room and Board	6,460	12,920
Student Service Fee	\$225	

\*Figures Based on 21-22 rates; 15 credit hours per semester and a standard, on-campus residence hall with the unlimited flex meal plan. Tuition amount does not apply to specialty programs with unique tuition rates.

### Military and Veteran Information

For more information, see the Military and Veteran Services section (see index for page number).

## Resident Status Policy

I. **Introduction.** Effective Fall 2018, undergraduate, graduate and doctoral students who are United States (U.S.) residents shall qualify for in-state tuition rates. This does not apply to specialty programs with unique tuition rates. For the purposes of determining resident status by Central Michigan University (CMU), "domicile" is defined as the place where an individual intends his/her true, fixed and permanent home and principal establishment to be, and to which the individual intends to return whenever he or she is absent from CMU. The individual must demonstrate "domicile" within the U.S. as a U.S. citizen, or proven "domicile" in the defined territories, or outlying possessions, of the U.S. subject to the jurisdiction of the U.S. This policy is designed to explain how a student may demonstrate the required intent and establishment of domicile as defined prior. An individual whose activities and circumstances, as documented to CMU, demonstrate that he or she has established U.S. domicile in and intends to be domiciled in the U.S. will be eligible for classification as a resident. An individual whose presence in the U.S. is based on activities and circumstances that are indeterminate or temporary, such as (but not limited to) educational pursuits, will be presumed not to be domiciled. The burden of proof is on the applicant to demonstrate with clear and convincing evidence that he or she is eligible for resident classification under this policy. To overcome a presumption of non-resident status, a student must file a properly completed Application for Resident Status and document with clear and convincing evidence domicile in the U.S. has been established. Furthermore, CMU reserves the right to audit enrolled or prospective students at any time with regard to eligibility for resident classification and to reclassify students who are registered under an improper resident status.

II. **Determining Resident Status.** A student's status as a resident or non-resident is established based upon the domicile of the student. The circumstances and activities to be considered in determining a student's domicile are set forth below:

A. Resident Status:

1. A student who is a dependent of parents who have established the U.S. as their domicile will be classified as a resident for tuition purposes.
2. A student 18 years or older who has attained independent status may be classified as a resident for tuition purposes if the student:
  - a. documents one year of continual physical presence in the U.S. as one of the criteria for determining eligibility for resident status, as described in II.C., below, and,
  - b. demonstrates by clear and convincing evidence that the student has established the U.S. as his or her domicile and intends to make the U.S. the student's permanent home, each independent of the student's attendance at CMU.

B. Non-Resident Status:

1. Any student under the age of 18 whose parents have not established the U.S. as their domicile is presumed to be a non-resident student.
2. Any student over the age of 18 who is financially dependent on parents who have not established the U.S. as their domicile is presumed to be a non-resident student.

C. Physical Presence in the U.S.:

1. Generally, an individual must document one year of continual physical presence in the U.S. as one of the criteria for determining eligibility for resident status. The year to be documented will be one year immediately preceding the first day of classes of the term in question. The year of continuous presence is never the only criterion used for determining resident eligibility and, in itself, will not qualify a student for resident status.

2. If the one year resident requirement is fulfilled while a student is enrolled in this University or another institution of higher education in the U.S., it is presumed that this student has not established domicile in the U.S. However, if substantial information exists (see below for other factors) that clearly demonstrates the establishment of a U.S. domicile, the individual may be immediately eligible for resident status prior to the passage of one year.

D. Circumstances and Activities that Lend Support to Claim of U.S. Resident Status:

The following circumstances and activities, though not conclusive or exhaustive, may lend support to a claim that a student has established the U.S. as the student's domicile and intends to make the U.S. the student's permanent domicile.

1. A person appointed to a regular full-time position at CMU (and that person's spouse or designated Other Eligible Individual (OEI) defined by CMU's OEI program through Human Resources, and dependent children) may be classified as a resident of the U.S. for tuition purposes.
2. Any individual using educational assistance under either Chapter 30 (Montgomery *GI Bill*® – Active Duty Program), Chapter 31 (Vocational Rehabilitation and Education), Chapter 33 (Post-9/11 *GI Bill*®), of title 38, United States Code, and/or the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b) (9)) who lives in the U.S. while attending CMU (regardless of his/her formal country of residence). Covered individuals (includes Veterans, current military personnel, and family members), eligible for VA education entitlement must provide a copy of the VA Certificate of Eligibility (COE) letter verifying approval of VA educational entitlement. Veterans and current military personnel include those individuals from all branches of the military including Army, Navy, Air Force, Marines, Coast Guard, Army and Air National Guard, and Reservists. Periods of qualifying service will be verified via a copy of the veteran's DD-214 form (member 4). *GI Bill*® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at [www.benefits.va.gov/gibill](http://www.benefits.va.gov/gibill).
3. A student who is married to a person who is classified as a U.S. resident will be classified as a U.S. resident for tuition purposes.
4. A student who has a parent or grandparent who graduated from CMU will be classified as a U.S. resident for tuition purposes, regardless of that student's actual domicile.
5. Additional Circumstances and Activities:
  - a. Continuous presence in the U.S. during periods when not enrolled as a student.
  - b. Reliance upon only U.S. sources for financial support.
  - c. Domicile in the U.S. of family, guardian, or other relatives or persons legally responsible for the student.
  - d. Former domicile in the U.S. and maintenance of significant connections therein while absent.
  - e. Ownership of a home in the U.S. if purchased without support from non U.S. sources.
  - f. Admission to and full-time practice of a licensed profession in the U.S.
  - g. Permanent full-time employment in the U.S., provided that the applicant's employment is the primary purpose for the applicant's presence in the U.S.
  - h. Spouse's full-time, permanent employment in the U.S., provided that the spouse's employment is the primary purpose for the student's presence in the U.S.

E. Circumstances and Activities that Generally Lend No Support to a Claim of U.S. Resident Status or Domicile:

The following circumstances and activities are temporary and indeterminate and, in and of themselves, do not demonstrate a permanent domicile in the U.S.

*GI Bill*® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at [www.benefits.va.gov/gibill](http://www.benefits.va.gov/gibill).

1. Voting or registration for voting in a U.S. State or applicable territory.
2. Possession of a valid driver's license issued within the U.S. or applicable territory.
3. Employment that is temporary or short-term.
4. Employment in a position normally held by a student.
5. Ownership of a home in the U.S. if purchased with support from U.S. sources.
6. The lease of living quarters in the U.S.
7. Payment of any U.S. state income or property taxes.
8. Financial hardship of the student caused by having to pay a higher tuition rate, or by any other reason.
9. The applicant's statement of intent to be domiciled in the U.S.
10. Presence in the U.S. while in attendance at CMU or another institution of higher education in the U.S.

**F. Non-Citizens Lawfully Admitted to the United States:**

(Lawful admission status is determined by the Director of the Office of Global Engagement, or designee.)

1. A non-citizen of the U.S. (and that individual's spouse or same-sex partner as defined by CMU Human Resources, Faculty Personnel Services, or other authorized office, and dependent children) may be eligible for classification as a U.S. resident for tuition purposes, if such person has an appropriate, current visa, and meets the requirements for U.S. resident status specified in this policy.
2. A non-citizen transferred to the U.S. for employment purposes (and that individual's spouse or otherwise eligible individual as defined by CMU Human Resources, Faculty Personnel Services, or other authorized office, and dependent children) may be classified as a U.S. resident for tuition purposes, if such person has an appropriate, current visa, and meets the requirements for U.S. resident status specified in this policy.
3. A non-citizen appointed to a regular full-time position at CMU (and that individual's spouse or otherwise eligible individual as defined by CMU Human Resources, Faculty Personnel Services, or other authorized office, and dependent children) may be classified as a U.S. resident for tuition purposes, as long as such person meets the requirements for U.S. resident status specified in this policy.
4. A non-citizen student who has a parent or grandparent who graduated from CMU will be classified as a U.S. resident for tuition purposes, if such person has an appropriate, current visa.

**III. Procedure to Determine Resident Status.** The procedure for determining resident status for an individual is as follows:

**A. Undergraduate Students at Time of Admission:**

1. The Executive Director of Admissions, or designee, shall determine the initial resident status of new undergraduate students.
2. If an individual disagrees with the initial decision of the Admissions Office, that individual must file a properly completed Application for Resident Status with the Registrar's Office. The Application for Resident Status must be received by the mid-point of the semester or term in which the individual is first enrolled at CMU. The Registrar's Office shall consider the Application for Resident Status and provide the individual with a written decision. If the individual continues to disagree with that decision, the individual may file an appeal following the procedures set forth in IV, below. Approved appeals are not retroactive for tuition and fee adjustments should the student submit their appeal post first term of enrollment with CMU. Approvals are effective commencing with term currently in progress or a future term depending on enrollment plans.

**B. Graduate Students at Time of Admission:**

The Director of Graduate Studies, or designee, shall determine the initial resident status of new graduate students prior to the first registration. If an individual disagrees with the decision of Graduate Studies, that individual must file a properly completed Application for Resident Status with the Registrar's Office. The Application for Resident Status must be received by the mid-point of the semester or term in which the individual is first enrolled at CMU. The Registrar's Office shall consider the Application for Resident Status and provide the individual with a written decision. If the individual continues to disagree with that decision, the individual may file an appeal following the procedures set forth in IV, below. Approved appeals are not retroactive for tuition and fee adjustments should the student submit their appeal post first term of enrollment with CMU. Approvals are effective commencing with term currently in progress or a future term depending on enrollment plans.

**C. All Students Requesting a Change in Resident Status:**

The procedure for determining whether a non-resident student has acquired U.S. domicile status is as follows: An individual must file a properly completed Application for Resident Status with the Registrar, or designee. The Application for Resident Status must be received by the mid-point of the semester or term in which the individual is first enrolled at CMU. The Registrar, or designee, shall consider the Application for Resident Status and provide the individual with a written decision. If the individual disagrees with that decision, the individual may file an appeal following the procedures set forth in IV, below.

**IV. Appeal Process.** If an Application for Resident Status is denied, the individual may request that his or her Application for Resident Status be reviewed by the Resident Status Appeal Committee. The following procedures shall apply:

- A. The Resident Status Appeal Committee shall be composed of the Executive Director of Admissions, the Registrar, the Director of Global Engagement, the Associate Vice President for Student Affairs, and the Director of Graduate Studies, or their respective designees. At least three of these individuals must participate in an appeal. The decision of the majority of those participating in the appeal shall be final.
- B. The appeal must be made in writing and must be received by the Registrar within fourteen (14) calendar days of the date of the denial letter. If the deadline falls on a weekend or a University holiday, it will be extended to the next business day.
- C. All contact with the Resident Status Appeal Committee must be in writing, unless otherwise requested by the Committee. An individual who wishes the Committee to consider information in addition to that provided with the Application for Resident Status must submit that additional information to the Resident Status Appeal Committee, in writing, with the appeal request.
- D. In its sole discretion, the Resident Status Appeal Committee shall have the right to request that the individual provide the Resident Status Appeal Committee such additional information and/or documentation as it deems appropriate, including meeting with the Resident Status Appeal Committee.
- E. The burden of proof is on the individual to demonstrate with clear and convincing evidence that he or she is eligible for a change in resident status because he or she intends to be domiciled in the U.S. and has, in fact, established domicile in the U.S.
- F. After the individual has submitted all requested information, the Resident Status Appeal Committee will review the individual's appeal. The individual will receive a written decision from the Resident Status Appeal Committee when the review is complete.
- G. Once the Resident Status Appeal Committee issues its decision, the decision is final regarding the submitted appeal for the semester being petitioned.

(continued)



### Tuition Status for Graduate Fellows and Assistants

For the purposes of determining tuition rates, doctoral level fellows and assistants are given in-state tuition for the duration of their program of study. Master's and specialist's level fellows and assistants are classified as U.S. domiciled for the purposes of tuition only during the academic year of the award (including subsequent summer).

### Residency Status for Migrants

Migrant status is one factor considered when determining if a student is domiciled in the U.S. and present in Michigan as a migrant for tuition purposes. Michigan migrants are defined as individuals who have made their livelihood in seasonal work in the State of Michigan and have traveled interstate for this purpose. Migrant students will meet the residency requirement if they, or their parents, or legal guardians, were employed in Michigan and met the criteria set forth in section II.D above for U.S. domicile for at least two months during each of the three of the preceding five years. Verification of employment as migrant workers should be secured from the Michigan Farm Labor and Rural Manpower Services Office. Other appropriate evidence may also be used by migrant workers to prove their residency.

### Financial Debt and Involuntary Withdrawal

Any amount owed to the university should be paid when due. A monthly late charge will be assessed to past due accounts if the balance is \$10.00 or larger. Visit [https://www2.cmich.edu/fas/fsr/student\\_acct\\_university\\_billing/Pages/Delinquent\\_Account\\_Policy.aspx](https://www2.cmich.edu/fas/fsr/student_acct_university_billing/Pages/Delinquent_Account_Policy.aspx) for the delinquency policy and late fee amounts

Any student who withdraws from the university or who has a financial debt is responsible for paying any outstanding financial obligations and will have a hold placed on all transcripts and future registrations if the balance remains unpaid. Graduating students with unpaid financial obligations may also have a hold placed on their diplomas.

Please be advised that CMU reserves the right to suspend campus ID privileges at any time due to a past due balance greater than \$100 including, but not limited to, meal plan, computer lab, library, bookstore, and flex privileges. Any delinquencies from the University Apartments may result in the initiation of eviction procedures. In addition, students with delinquent accounts may have a prepayment hold placed on their account, requiring payment in full at the time of registration for all future semesters.

In mitigating circumstances, students with unpaid financial obligations may be involuntarily withdrawn from classes by CMU Administration.

### Refunds

Refunds are issued weekly when a credit balance exists on a university account. All potential refunds are applied to university obligations before a refund is issued to an individual. Refunds of less than \$1.00 will not be issued unless the student requests it from the Student Account Services and University Billing Office, but will be carried forward to offset future university charges.

All student refunds are issued electronically, either by direct deposit into an existing personal checking or savings account or to a BankMobile Vibe checking account. Students must make a selection for their preferred method by logging in to Central Link, clicking on "My Account" in the upper right corner; scrolling on left side to the Finance heading; then clicking on "Set Up Direct Deposit for my Student Refund Method." The student will then be redirected to the BankMobile website to make their refund choice.

### Vehicle Registration Refunds

Students graduating or leaving the university might be entitled to a refund of the virtual permit price. The amount of refund varies based on semester and week into classes. Requests for refunds should be made to Parking Services.

Please visit the [Parking Services website](#) for more information on vehicle registration refunds.

### Enrollment Reservation Deposit Refunds

The \$175.00 Enrollment Reservation Deposit is refundable by submitting a written request to the Admissions Office for students who cancel their admission prior to the established deadline dates as indicated in admission correspondence for the specific semester or session, and who have not attended an orientation session. **Note:** CMU Online students are not charged for completing online orientation.

### Cancellation of Housing Agreement

The residence hall agreement is for the entire academic year, or remainder of the year, provided the student is enrolled at the university. The residency and financial conditions of the agreement shall not be terminated to move to a private home, fraternity or sorority house, or other housing or to commute during the period covered by the agreement. Students who break the residence hall agreement without approval from Residence Life officials will owe full room and board charges for the entire academic year.

Students who are approved for release from the residence hall agreement for any reason are subject to the following schedule of cancellation charges:

#### New Applicants Only:

- Cancellation of this agreement after May 1 but by August 1 will result in a \$300 cancellation fee.
- Cancellation of this agreement after August 1, but prior to the first day the halls open in the fall shall result in a \$500 cancellation fee.

#### Returning Students Only (Prior to the halls opening):

- Students signing an agreement have a 30-day cancellation period without penalty. Students who sign an agreement can cancel without penalty, but ONLY IF they provide a thirty-day written notice of said cancellation, from the day they apply, and the expiration of the thirty-day notice period occurs prior to May 1.
- Students cancelling after the 30-day cancellation period and by August 1 (December 1 for spring semester) will be charged a \$300 cancellation fee.
- Students cancelling after August 1 (December 1 for spring semester) but before the first day the halls open will be charged a \$500 cancellation fee.

#### All Students (during the Academic Year):

- **All Cancellation Requests must be in writing.**
- Cancellation of this agreement from the first day halls open in the fall but prior to November 1 shall result in up to a \$900 cancellation fee.
- Cancellation of this agreement after November 1, but prior to the end of the fall semester shall result in up to a \$600 cancellation fee.
- Cancellation of this agreement from the end of the fall semester but before April 1 shall result in a \$300 cancellation fee.
- Cancellation of this agreement after April 1 shall result in a \$100 cancellation fee.

Other charges and damages may apply under the provision of the agreement such as damage to room. If a student is not approved for release from their residence hall agreement and they choose to move anyway, they are still financially responsible for the entire contract.

**Apartments.** Residents are charged for actual days up to the termination of their Housing Agreement. Family housing residents may terminate by giving the University Apartments Office 45 days written advance notice. Single student resident contracts are for the entire academic year.

### Refunds for Student-Initiated Complete Withdrawals from All Classes

Students withdrawing from the university must complete a withdrawal online through CentralLink to initiate the refund process. Further information regarding the complete withdrawal policy appears in the section on Academic Policies and Procedures. Students who have credit balances in excess of \$1.00 on their student accounts after all university obligations have been met will receive a refund unless the student received financial aid.

## Refunds upon Withdrawal for Students Receiving Financial Aid

Financial aid disbursed through the Office of Scholarships and Financial Aid is applied to student accounts to pay for university charges. Credits for the unused portion of tuition, special course fees, housing and other university charges resulting from a student's withdrawal from the university are used to repay the financial aid sources in full prior to refunding the student. Withdrawing students who have received refunds for financial aid to cover non-institutional, educational costs may be required to repay financial aid sources.

Refunds for students who receive Title IV financial aid are allocated to the financial aid source in the following order:

- to outstanding balances on Federal Direct Loans (Unsubsidized and Subsidized)
- to outstanding balance on Federal Plus Loans
- to Federal Pell Grant awards
- to Federal SEOG awards
- to TEACH Grant awards
- to other Title IV student assistance
- to other federal, state, private or institutional student assistance
- to the student

## Drop and Add Refunds

The Student Account Services and University Billing Office will automatically process refunds/charges as a result of a change in class registration. Any credit resulting from a change in class registration will be applied to any outstanding university obligations before a refund is issued. No refunds are made after the registration period closes unless the student is completely withdrawing from the university or the class is dropped on *CentralLink* prior to its second scheduled meeting time.

## Tuition Refunds

A percentage of the tuition listed below plus the corresponding percentage of all fees will be refunded to a student who withdraws from the university.

### Percentage of Tuition and Fee Refund for Fall/Spring

Length of Session	Calendar Days Beginning with First Day of Class			
16 Weeks	Days	1-10	11-26	27-54
	Refund	100%	50%	25%
10 Weeks	Days	1-5	6-17	18-33
	Refund	100%	50%	25%
8 Weeks	Days	1-4	5-12	13-26
	Refund	100%	50%	25%
5 Weeks	Days	1-3	4-8	9-17
	Refund	100%	50%	25%

## CMU Online Refunds

*Drop or Withdraw from an Online Course:*

- A Drop occurs prior to the course start or prior to the second meeting time for face-to-face classes or prior to the second week for CMU Online classes.
- A Withdrawal occurs after second meeting time for face-to-face classes or after the first week for online classes and before the midpoint.

*Important Information Regarding Course Drops and Withdrawals for All Online Courses:*

- Drops and withdrawals are done by the student, within the permitted time frame for doing so, through the Course Search and Registration System within *CentralLink*.
- Withdrawals after the midpoint are not permitted.
- Students who cease or fail to attend (virtual or otherwise), without formally dropping or withdrawing from the course will receive a grade of "E."
- Telephone requests to drop or withdraw will not be accepted.
- In the event that a student is not able to drop or withdraw from a course online through Course Search and Registration, the student must immediately notify [cmuonline@cmich.edu](mailto:cmuonline@cmich.edu) in writing for assistance.
- Drops and withdrawals can and do affect your financial aid eligibility. For more information go to <http://global.cmich.edu/courses/drop-withdraw.aspx>.

For more information and a schedule of refund percentages, consult the most current CMU Bulletin (<http://cmich.smartcatalogiq.com/>). For a Course Drops/Withdrawals Chart, see <https://www.cmich.edu/global/calendar/Pages/default.aspx>.

## CMU Online Refund Policy

Application fees, main campus enrollment fees, prior learning assessment credit fees, and graduation fees are not refundable.

Tuition refunds requested prior to the beginning of the course shall be made in full. Tuition refunds requested after the beginning of the first class meeting time or within the first week of an online class and before the second class meeting or before the second week of an online class shall be refunded 100%, less the \$50 drop fee. Tuition refunds requested after the beginning of the second class meeting time or in the 2nd week of an online class and before the midpoint of the course shall be refunded in proportion to the calendar time remaining in the course, less a \$50 withdrawal fee, according to the refund chart at the end of this section. Students may not withdraw after the midpoint of the course.

See the chart on the next page.

## CMU Online Refund Chart for Course Drops and Course Withdrawals

All students dropping or withdrawing from courses after the start date and time will be assessed a \$50.00 fee in addition to the refund percentage in the chart below. See chart below for refund percentages.

CMU ONLINE COURSE FORMAT	16-WEEK CLASS	12-WEEK CLASS	8-WEEK CLASS	N/A	N/A	N/A	N/A
FACE-TO-FACE COURSE FORMAT	16-WEEK CLASS	12-WEEK CLASS	8-WEEK CLASS	5-WEEK CLASS	1-WEEK CLASS	4 WKND	3 WKND
FACE-TO-FACE COURSE MEETING TIMES	16 MEETINGS	12 MEETINGS	8 MEETINGS	10 MEETINGS	5 MEETINGS	8 MEETINGS	6 MEETINGS
<b>COURSE DROPS:</b>							
Prior to the second meeting time for face-to-face or prior to the start of the second week for CMU Online	100%	100%	100%	100%	100%	100%	100%
<b>COURSE WITHDRAWALS:</b>							
Prior to the third meeting time for face-to-face or prior to the start of the third week for CMU Online.	75%	75%	75%	75%	50%	75%	75%
Prior to the fourth meeting time for face-to-face or prior to the start of the fourth week for CMU Online.	75%	75%	50%	75%	0%	50%	0%
Prior to the fifth meeting time for face-to-face or prior to the start of the fifth week for CMU Online.	75%	75%	0%	50%	NA	0%	NA
Prior to the sixth meeting time for face-to-face or prior to the start of the sixth week for CMU Online.	50%	50%	NA	0%	NA	NA	NA
Prior to the seventh meeting time for face-to-face or prior to the start of the seventh week for CMU Online.	50%	0%	NA	NA	NA	NA	NA
Prior to the eighth meeting time for face-to-face or prior to the start of the eighth week for CMU Online.	50%	NA	NA	NA	NA	NA	NA
Prior to the ninth meeting time for face-to-face or prior to the start of the ninth week for CMU Online.	0%	NA	NA	NA	NA	NA	NA

### Notes:

1. If a class has a format that is not listed on the grid, or for courses offered in a hybrid format, please compute total number of days occurring before the withdrawal date and divide by the total number of days in the course to find the percent of completed course time. If the course is 10-33% over, the amount to be refunded is 75%; if the course is 34-49% over, the amount to be refunded is 50%; if the course is 50% or more completed, a withdrawal will not be permitted. A "W" grade will be given to any student who formally withdraws from a course prior to its midpoint.
2. If you are a financial aid student and you withdraw from or drop classes to a point where you are considered less than half time for the semester after a financial aid disbursement has been made and a refund check sent, you could be charged back for the full amount of the disbursement.
3. Students who cease/fail to attend (virtual or otherwise) and have not formally withdrawn from the course will receive a grade of "E." A charge back for financial aid received may be incurred based on student's last day of attendance.
4. To drop a weekend course, the drop must be completed prior to 9 a.m. (EST) of the second class meeting date. After 9 a.m. and up to the midpoint, it will be classified as a course withdrawal. To drop a weekday course, the drop request must be completed prior to 6 p.m. (EST) of the second class meeting date. After 6 p.m. and up to the midpoint, it will be classified as a course withdrawal.
5. The start time for CMU Online courses is 12:01 a.m. on the first day of class. Drop/withdrawal requests received after that will be assessed a \$50 fee. Each new week for an online class begins on Monday at 12:01 a.m. and ends on the following Sunday at 12:00 midnight. The amount of tuition refunded is based on the week the request is received within. Holidays do not have any effect on this definition of a week. Online classes follow the Eastern Standard Time (EST) zone.
6. CMU complies with the State Council of Higher Education for Virginia, Title of Regulations regarding student refunds. See Authorization on page 14 for detailed information.

# Scholarships and Financial Aid «

## Office of Scholarships and Financial Aid

Central Michigan University  
Warriner Hall 202  
Mount Pleasant, MI 48859  
989-774-3674  
Fax: 989-774-3634  
e-mail: [financialaid@cmich.edu](mailto:financialaid@cmich.edu)

The Office of Scholarships and Financial Aid (OSFA) at Central Michigan University, in conjunction with the federal and state governments and private and civic organizations, offers a variety of scholarship, grant, loan, and employment opportunities to assist you in financing your education.

Approximately eighty percent of all CMU students receive some form of assistance from these sources. The purpose of financial aid is to ensure that the university continues to make it possible for students of all degrees of financial capacity, special talent, or high scholastic merit to attend CMU. Should you have any questions during the application process, please do not hesitate to contact us.

CMU will limit institutional funds (i.e., need-based grants, merit scholarships, employee tuition waivers, Indian Tuition Grant Waiver, etc.) to the annual cost of attendance.

The following general information is provided for prospective and continuing undergraduate students.

## Applying For Financial Aid

To apply for financial assistance at Central Michigan University, prospective students must complete the Free Application for Federal Student Aid (FAFSA), available online at <https://studentaid.gov/h/apply-for-aid/fafsa> or from high school counselors, financial aid offices at other institutions of higher learning, and the CMU OSFA. Online applications are strongly encouraged.

All CMU offers are made for a period of one academic year only. Reapplication must be completed for each year.

Financial aid awards for the prospective student are not offered before the student has attained regular admission status through the Admissions Office.

Students must have regular admission in an aid eligible degree or certificate program. Not all certificate programs are eligible for federal aid. Contact the financial aid office for information on aid eligible certificate programs.

Because need-based financial aid is limited, it is awarded to the earliest applicants who demonstrate the greatest financial need until funds are exhausted.

## Financial Aid Eligibility: General Requirements

To be eligible for CMU and federal undergraduate assistance you must:

1. Be a U.S. citizen or eligible non-citizen for federal, state, and most CMU programs.
2. Demonstrate financial need (for need-based programs) as determined by the CMU OSFA and by federal regulations.
3. Be enrolled full time (12 credits per semester except for federal and institutional grants and/or Federal Direct Loans) in a degree program. Students enrolled less than full-time but at least half-time (6 credits per semester) may have grant aid pro-rated.

**NOTE:** In order to graduate within four years in a degree program that requires a minimum of 120 hours of credit, a student must average at least 30 hours of credit each year. Several degrees may require a minimum greater than 120 hours.

4. Federal aid recipients may not owe a refund from any federal grant or loan or be in default on any federal loan.
5. Students must be enrolled in CMU courses to receive financial aid, except under special circumstances. Students whose program of study requires a course(s) not offered at CMU may apply for a Consortium Agreement to receive financial aid while enrolled at another institution.
6. Students can only receive a Federal Pell Grant at one institution. Students may receive a Federal Stafford Direct Loan while enrolled at least half-time simultaneously at two institutions up to the annual maximum grade-level limit.
7. Guest students attending CMU are not eligible to receive financial assistance through CMU. Students should check with their home institution to determine eligibility for financial assistance.
8. Eligibility for federal student aid requires a student to be admitted into a degree-seeking program AND be currently enrolled in CMU classes. Students planning to use life experiences for evaluation and potential course credit are not eligible for financial aid to cover the cost of these courses.
9. Students must begin participation in their courses of study to establish aid eligibility for that course. If the student does not begin participating in their course(s) by the 2nd Friday of the term/module that the course falls into (this date will differ depending on the course start date), the student will be administratively dropped from that course, and financial aid will be re-evaluated, which may have an impact on eligibility. This process follows federal regulations for the purpose of establishing financial aid eligibility.

## Verification

Verification is a process of review that determines the accuracy of the information submitted by the student and family on the FAFSA and that resolves conflicting data. Students may be selected for verification through a random selection by the U.S. Department of Education. The OSFA is required to collect documents to verify the information on the FAFSA. These documents include, but are not limited to, federal tax transcripts, documentation of assets and family size.

A timely response to a documentation request is important. Your financial aid application cannot be processed without the requested documentation.

## Fraud

Falsification of income information submitted for the purpose of receiving financial assistance will result in cancellation of all future assistance and repayment of all prior assistance received falsely. If federal and/or state funds are involved, notification of the false information will be provided to the proper agencies (U.S. Department of Education and/or Michigan Department of Treasury) for their further disposition.

## Determination of Financial Need

Need is determined by subtracting a student's total family contribution, as determined by the federal needs analysis, from the estimated cost of attendance.

(continued)



## Independent Status

The expected family contribution for education expenses for students who meet the criteria for financial independence is evaluated exclusive of parental support. To be independent for 2022-2023, students must answer yes to at least one of the following questions:

1. Were you born before January 1, 1999?
2. At the beginning of the 2022-23 school year, will you be working on a master's or doctorate program (such as an M.A., M.B.A., M.D., J.D., Ph.D., Ed.D., or graduate certificate, etc.)?
3. As of today, are you married?
4. Do you have children who receive more than half of their support from you between July 1, 2022 and June 30, 2023?
5. Do you have dependents (other than your children or spouse) who live with and receive more than half of their support from you, now and through June 30, 2023?
6. At any time since you turned age 13, were both your parents deceased, were you in foster care, or were you a dependent or ward of the court?
7. Are you a veteran of the U.S. armed forces?
8. Are you currently serving on active duty in the U.S. Armed Forces for purposes other than training?
9. Are you or were you an emancipated minor as determined by a court in your state of legal residence?
10. Are you or were you in legal guardianship as determined by a court in your state of legal residence?
11. At any time on or before July 1, 2021, did your high school or school district homeless liaison determine that you were an unaccompanied youth who was homeless?
12. At any time on or after July 1, 2021, did the director of an emergency shelter or transitional housing program funded by the U.S. Department of Housing and Urban Development determine that you were an unaccompanied youth who was homeless?
13. At any time on or after July 1, 2021, did the director of a runaway or homeless youth basic center or transitional living program determine that you were an unaccompanied youth who was homeless or were self-supporting and at risk of being homeless?

Students may be required to document their status with the OSFA. Students with unusual or extenuating circumstances relating to independent status should contact the OSFA.

## Parental Contribution

For dependent students, the OSFA uses the federal needs analysis to determine the family contribution, taking into account the family's income and assets, taxes paid, the household size, and the number of college students in the home.

## Student Contribution

The federal needs analysis is utilized to determine the student's contribution and the student's spousal contribution, if applicable. Students and their spouses are expected to assist in meeting educational costs. The expected contribution is calculated from 2020 year earnings and untaxed income, and a percentage of personal savings and assets.

## The Student's Financial Aid Offer

A financial aid offer is calculated for each student applicant based on the student's demonstrated financial need, date of application, availability of funding and eligibility. If applicable, a combination of gift (scholarships and grant) and self-help (job and loan) is offered to the student.

Talent scholarships or grants-in-aid, i.e., Athletic; Music; Communication, Journalism, and Media; and Theatre and Dance are awarded by the respective departments for which the awards are named. Merit Scholarships are awarded at the time of admission, based on admission criteria, not financial need. If an award recipient is also receiving university or federal need-based financial assistance, aid from the Michigan Competitive Scholarship Program, or from an external agency, it may be necessary to include the talent scholarship or grant-in-aid in the financial aid offer. This could result in a reduction in the talent scholarship or grant-in-aid.

The student is responsible for following the procedures included in the offer notice to secure their aid.

## Changes in the Offer

The OSFA anticipates that students will receive the aid offered in their award statement. It may, however, be necessary for the university to increase or decrease aid if changes occur in the student's enrollment status, family financial status, or the student's own financial resources or expenses.

Changes in enrollment status include changing undergraduate majors, taking fewer than 12 credit hours per semester, registering for study away from the university, or withdrawal before the end of the semester. Reductions in credit hours below 12 credits in a semester may result in a cancellation of CMU assistance for that semester. Students should consult a financial aid advisor before making a change in enrollment status.

Changes in family financial strength include significant discrepancies between the resources described in the FAFSA and those reported in the federal income tax return or unanticipated family financial reverses lasting longer than three months. Students should consult a financial aid advisor if there is an unusual circumstance that impacts the family's financial strength.

Changes in student resources include receipt of educational benefits such as employee/dependent tuition benefits, receipt of aid in amounts that differ from the estimates on the offer statement, or that were not included in the offer. Students must report receipt of additional resources not considered in the original aid offer. Students who receive scholarships from private donors may receive a reduction in some awards to ensure that the total aid resources do not exceed a student's financial need.

## Offer Revision

CMU reserves the right to revise a student's aid offer if government regulations, university policy, or sources of funding change prior to or during the academic year. This also applies if over-payments or over commitments occur, or if acceptance of an offer is after the deadline.

Aid may be reduced or withdrawn after a student has received a direct payment of financial aid. The reduction in aid will be charged to the student's account and the student will be required to pay that amount to CMU.

## Aid Disbursement

Registration is checked weekly to verify half-time enrollment for the semester. Financial aid is typically divided in half and credited directly to the student account. When possible, awards are applied to the first bill in each semester; however, late awards or award revisions will be applied throughout each semester. Financial aid funds will be applied against the student's tuition, university housing cost for the semester, and any other charges on the student's account at the time of disbursement.

**NOTE:** First-time borrowers of the federal direct student loan must complete an entrance interview and a Loan Agreement for a Subsidized/Unsubsidized Loan (MPN) prior to disbursement of loan funds. All borrowers must complete the Annual Student Loan Acknowledgement.

If there are more credits than charges, a refund will be issued for the balance. It is the student's responsibility to verify the accuracy of billing charges, financial aid credits, and refund.

Refunds are usually available to on-time filers by the first week of classes. Late filers should plan to have sufficient funds for meeting expenses until a refund is available.

If you register for additional classes after the disbursement of your semester aid, it is your responsibility to pay for the classes from any refund you have received.

### Non-CMU Scholarship Disbursement Policy

1. Estimated scholarships, i.e., outside agency, will not reduce the amount of tuition payable by posted deadlines.
2. Donors may specify the semester(s) in which the scholarship is paid.
3. If a student wants the scholarship distributed in a way that differs from what the donor requests, the student will be asked to get an authorization letter from the donor.
4. If the donor letter does not specify a distribution schedule, CMU will disburse scholarships of \$500 or less all in the fall semester. Scholarships of \$501 or more will be disbursed equally to the fall and spring semesters.
5. If the scholarship has been split and the donor has not given instructions, the student may request the entire award be moved to the fall semester. However, the student is then cautioned that they may be short of funds for the spring semester.

### Tax Status of Financial Aid

The Tax Reform Act of 1986 amended the Internal Revenue Code section pertaining to the taxability of scholarship and fellowship grants. Effective January 1, 1987, only the amount of a scholarship or fellowship grant that is used for qualified tuition and related expenses (i.e., tuition, fees, books, supplies, and equipment) is excluded from gross income. Any amount of a scholarship or fellowship grant that is used for non-course related expenses (such as room and board) is taxable and must be included in the student's gross income. Students should keep accurate records of all tuition paid and related expenses, and financial aid received.

### CMU Scholarship Policy

Recipients of CMU merit and talent-based scholarships of a dollar value equal to or greater than \$2,500 are required to reside on campus during their freshman and sophomore years unless they qualify as commuting students or for another exception to the Campus Residency Policy.

Students may receive two renewable merit scholarships. Students who are selected for more than two renewable scholarships may choose the awards of highest value.

CMU will limit institutional funds (i.e., need-based grants, merit scholarships, employee tuition waivers, Michigan Indian Tuition Waiver, etc.) to the annual cost of attendance.

CMU merit scholarships are renewable for three consecutive academic years or until degree requirements are met; whichever comes first.

### Sources of Aid

A financial aid offer could include a scholarship or grant from CMU or from a federal or state program. To be eligible for the following CMU scholarships and grants, students must be admitted to programs offered on the Mt. Pleasant campus with the exception of students transferring to CMU. Students attending off campus may be eligible for a transfer scholarship if awarding criteria is met. **NOTE:** Residency Requirement: To renew awards, all recipients of CMU merit- and talent-based scholarships of a dollar value equal to or greater than \$2,500 will be required to reside on campus during their freshman and sophomore years.

## Merit Scholarships

### The Centralis Scholarship Program

The CMU Board of Trustees created two levels of merit-based scholarships that are awarded to incoming freshmen who have demonstrated outstanding academic performance and curricular involvement. All new students entering CMU as freshmen with a minimum cumulative grade point average of 3.7 and an ACT composite of 27 or higher (SAT of 1260 or higher) are invited to compete for a Centralis award. The Centralis competition involves an examination administered on the CMU campus. For information on the Centralis Scholarship Competition, contact the Admissions office.

#### Centralis Program

The Centralis Scholarship Program provides merit-based awards annually to outstanding high school seniors. All Centralis award recipients are automatically admitted to the Honors Program and are required to complete the Honors Program protocol in its entirety, in addition to the stipulations and expectations outlined in the "Centralis Conditions of Award" and "Centralis Scholarship Policies" documents.

#### The Martin H. Cholakian Centralis Scholarship

Martin H. Cholakian was a member of the Board of Trustees from 1989 until his death while attending a university event in Canada, January 29, 1994; and this scholarship was named in his memory. Mr. Cholakian was a dedicated and active supporter of CMU and took special interest in the university's pioneering efforts to bring higher education to non-traditional students in distant locations.

#### John P. and Doris L. Crippa Endowed Centralis Scholarship

Through her estate, Doris L. Moulton Crippa established an endowed Centralis Scholarship. Doris and John Crippa were great believers in higher education; they were very interested in and had excellent rapport with students, faculty, staff and alumni.

#### Rollie Denison/Development Board Centralis Scholarship

Established in 1999 from funds donated by current and former members of the Central Michigan University Development Board of Directors.

#### Fabiano Family Centralis Scholarship

The Fabiano family of Mt. Pleasant, MI established the first Centralis Scholarship in 1989 to continue the family's long-standing commitment to education and community well-being. Eleven members of the Fabiano family attended or graduated from CMU between 1920 and 1989. The Fabiano family has maintained strong interest in academic excellence and involvement in programs that result in university growth and prosperity.

#### The Bernard J. Firestone Centralis Scholarship

Established in 1989 by the Board of Trustees in memory of Bernard J. Firestone, member of the Board of Trustees from April 28, 1989, until his tragic death September 6, 1989. Mr. Firestone's life was devoted to the welfare of others through education and the labor movement as means of improving the human condition.

#### R.L. Kessler Family Endowed Centralis/Honors Program Scholarship I

#### R.L. Kessler Family Endowed Centralis/Honors Program Scholarship II

#### R.L. Kessler Family Endowed Centralis/Honors Program Scholarship III

#### R.L. Kessler Family Endowed Centralis/Honors Program Scholarship IV

The Roger L. Kessler family of Midland, Michigan, established their fourth of four Centralis scholarships in 2004. Mr. Kessler is a 1958 cum laude CMU graduate who retired after having served for 15 years as vice president and controller of The Dow Chemical Company. He is currently a member and past chair of the CMU Board of Trustees and the CMU Development Board of Directors.

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**Fred R. McNabb Centralis Scholarship**

Converted in 1996 from a loan fund established in 1976 through the estate of Fred R. McNabb. Spendable investment income will be awarded to CMU Centralis Scholars.

**Robert and Lura Myers Centralis Scholarship**

Robert and Lura Myers of Lapeer, Michigan established an endowed Centralis Scholarship in 1997.

**Milton Peterson Endowed Centralis Scholarship**

Mr. Peterson of Corning, New York established the first endowed Centralis Scholarship to recognize the university's dedication to academic excellence. Mr. Peterson is a patent attorney for Corning Glass who wants to repay CMU for his successes due to the education and opportunities provided by CMU.

**Leonard E. Plachta Centralis Scholarships**

In recognition of his years of service as president, the Board of Trustees established the Leonard E. Plachta Centralis Scholarships; one scholarship will be established each year until four are established.

**Robert Benjamin Shaver Centralis Scholarship**

Converted in 1996 from a loan fund established through the estate of Robert Benjamin Shaver, lifelong resident of Gratiot County. Spendable investment income will be awarded to CMU Centralis Scholars.

**Arnold J. and Margaret L. Sowmick Centralis Scholarship**

Established in 1990 by the Board of Trustees in honor of Arnold J. and Margaret L. Sowmick, respected leaders of the Saginaw Chippewa Tribe, who died as a result of a car accident July 29, 1990. Arnold was chief of the Saginaw Chippewa Tribe from 1982 to 1990 during which time his foresight and leadership were instrumental in establishing progressive programs especially in the areas of education and health. Margaret and Arnold, in their words and deeds, were friends of CMU and were instrumental in forming positive relationships that benefited their tribe and the university.

**Augusta McIntosh Tobin Centralis Scholarship**

Converted in 1996 from a loan fund established in 1985 through the estate of Augusta McIntosh Tobin (Class of 1925), who contributed 40 years of her teaching career to the Dearborn, MI school system.

**Ronald A. Zuverink Memorial Centralis Scholarship**

Established in 2001 by the estate of Ronald A. Zuverink, former private business owner in Chicago, Illinois. Proceeds from the endowment will be used to support Centralis scholarships.

**Maroon and Gold Merit Scholarship**

The Maroon and Gold scholarship considers high school GPA and SAT/ACT scores. The scholarship offers between 20% and 65% of tuition (30 new CMU credits per academic year) for up to four consecutive years or degree completion, whichever comes first. Incoming freshman who have applied to CMU are automatically considered for these awards. Submit a complete application, including all supporting materials by December 1 for priority consideration.

**Leader Advancement Scholarship**

In 1997 the Leadership Institute was established as a new initiative of CMU to provide a foundation of skills necessary for under-graduate students to pursue positions of leadership in business, government, education, and community agencies. As part of the Institute, the Leader Advancement Scholarship (LAS) provides \$2,000 per academic year to up to 80 incoming freshmen who have distinguished themselves through a record of leadership and involvement during their high school years. Competitors must have a minimum cumulative high school GPA of 3.0. Recipients are selected by a committee through analysis of the LAS Application, a portfolio-like record of activities that is completed by the student, and an on-campus interview. Scholarship recipients must maintain full-time status and a cumulative GPA of 2.75 while at CMU and show significant progress on the LAS protocol. Renewal requires students to reside in on-campus residence halls in both their freshman and sophomore years.

**Lloyd M. Cofer Scholarship**

Established in 1980 in memory of Dr. Lloyd M. Cofer, charter member of the CMU Board of Trustees, is awarded to deserving incoming freshmen who are graduates of a Detroit public high school. The value of this scholarship is \$4,125 per academic year. Scholarships are renewable for three additional years for recipients who maintain a satisfactory academic progress record, full-time continuous enrollment, and a 2.50 (or higher) cumulative GPA. Recipients must complete 24 new credit hours each academic year. Renewal requires students to reside in on-campus residence halls in both their freshman and sophomore years.

Students who receive this award must agree to live in the residential college their freshman year and complete the Cofer Scholars Protocol, which outlines the requirements for the scholarship program.

Students are not eligible to receive the Cofer Scholarship and either the Wade McCree or Detroit Compact Award. Students may select the award of highest value.

**Multicultural Advancement Scholarship**

The Multicultural Advancement Scholarship recognizes and supports students who, through past activities or educational aspirations, indicate an interest in the advancement of minorities in American society. These scholarships are equal to \$4,125 per year and are renewable for three additional years for recipients who maintain full-time enrollment and a 2.50 cumulative grade point average. Recipients must complete 24 new credits each academic year.

**Multicultural Award of Distinction Scholarship**

The Multicultural Award of Distinction is awarded each year. The value of the award is equal to the cost of tuition, fees, room and board, and a \$500 allowance toward the cost of books and supplies. The award is renewable for three additional, consecutive years through maintenance of a 3.25 (or higher) cumulative GPA, successful completion of the MAC scholars protocol, and completion of at least 30 new credit hours per year. Renewal requires students to reside in on-campus residence halls in both their freshman and sophomore years.

Students are not eligible to receive both the Multicultural Advancement Award and the Wade McCree, Detroit Compact Award, or Leader Advancement Scholarship. Students may select the award of highest value.

**Transfer Recognition Scholarship**

All new transfer students entering CMU with a minimum cumulative grade point average of 3.0 and 12 transferable credits are eligible for a \$2,000 award. This scholarship is renewable for up to three years. Award renewal requires earning 30 new CMU credits over an academic year. Third-year renewal requires a minimum CMU cumulative GPA of 3.0 and 60 new CMU credits.

This award cannot be combined with the Transfer Honors Scholarship.

**Transfer Success Scholarship**

This \$1,000 scholarship is available to all new transfer students with a 3.0 cumulative college GPA and a minimum of 12 transferable credits. Open to part-time students enrolling in 6-11 CMU credits per semester. The scholarship is renewable for up to three years by maintaining at least half-time enrollment and earning a minimum of 15 credits per academic year. Third-year renewal requires a CMU cumulative GPA of 3.0 and at least 30 new CMU credits.

This scholarship cannot be combined with the Transfer Honors or Recognition scholarships.

**Phi Theta Kappa Award**

This \$1,000 scholarship is available to Phi Theta Kappa members with a 3.5 cumulative GPA and a minimum of 12 transferable credits. The scholarship is renewable for up to three years by maintaining full-time enrollment; earning at least 30 new CMU credits per academic year. Third-year renewal requires a minimum of a 3.0 CMU cumulative GPA and at least 60 new CMU credits. If eligible, this award can be earned with the Transfer Honors or Transfer Recognition scholarships.



## Talent Scholarships

**Athletic Scholarships.** Scholarships are awarded to outstanding athletes in men's and women's sports. Further information may be obtained by contacting the CMU Director of Athletics.

**Communication and Dramatic Arts Talent Scholarships.** Talent scholarships are awarded to full-time students participating in co-curricular activities of the School of Communication, Journalism, and Media, and the Department of Theatre and Dance. Contact the departments directly for further information.

**Broadcast and Cinematic Arts Talent Scholarships.** Talent scholarships are awarded to full-time students participating in co-curricular activities of the School of Communication, Journalism, and Media. Contact the department directly for further information.

**Music Talent Scholarships.** Talent scholarships are awarded to full-time students participating in co-curricular activities of the School of Music. Contact the School directly for further information.

## Endowed Scholarships and Awards

A number of scholarship awards are available annually to CMU students, established through endowments or by annual contributions from individuals, businesses, or civic organizations. Some are based on financial need. Others are based on other non-need-related criteria. See *Endowed Scholarships and Awards* in the Index for the page number. Further information may be obtained from the Office of Scholarships and Financial Aid and specific departments.

## External Scholarships

Many foundations, corporations, business and civic organizations, and private individuals contribute scholarships for students attending CMU. The best source of information on these opportunities is a local high school counselor.

Scholarship Universe-Gold is an external scholarship portal that offers many scholarship opportunities. Students can access the portal at <https://cmichgold.scholarshipuniverse.com/>

## International President's Award

International undergraduate students who do not currently reside in Michigan can pay the in-state tuition rate through the President's Award scholarship program, earning a cost reduction of approximately 50 percent. No additional application is required for this award. Please note, any student sponsored by their home country is not eligible for this award.

To be eligible for the President's Award, you must meet the following requirements:

- Overall GPA of 3.3 or higher (on a 4.0 scale)
- Proof of English proficiency
- Minimum of 24 college credit hours completed (for incoming transfer students only)

Awards can be applied for up to four years of study if the following requirements are met:

- Continuous full-time enrollment (at least 12 credit hours) in fall and spring semesters; summer attendance is not required.
- Live on-campus as a freshman and sophomore, or until the completion of 55 credit hours at CMU (Transfer students are exempt from this requirement.)
- Maintain an overall GPA of 3.0 (on a 4.0 scale).

## Grants

### CMU Grants

These grants are awarded on the basis of demonstrated need, with a minimum grant of \$50 and a maximum grant not to exceed the gift portion of the student's financial aid offer. An employee/dependent tuition benefit is counted in the gift portion of the student's financial aid offer. Receipt of the tuition benefit will result in the cancellation of a CMU grant.

### Federal Pell Grants

Students apply for a Federal Pell grant by filing a Free Application for Federal Student Aid (FAFSA). Eligibility for a Federal Pell grant is determined by a need analysis formula prescribed by Congress.

### Federal Supplemental Educational Opportunity Grants (SEOG)

These are federal grants awarded by CMU to undergraduate students who are U.S. citizens or permanent residents demonstrating financial need. The amount of the grant is determined based on the federal needs analysis and available funding. Students must be making satisfactory academic progress to continue receiving the grant, and meet all other conditions outlined in the Financial Aid Eligibility section of this Bulletin.

### TEACH Grant Program

Through the College Cost Reduction and Access Act of 2007, Congress created the Teacher Education Assistance for College and Higher Education (TEACH) Grant Program that provides grants of up to \$4,000 per year to students who intend to teach in a public or private elementary or secondary school that serves students from low-income families.

Under the budget Control Act of 2011, TEACH grant funding was reduced. TEACH grant awards where the first disbursement is made on or after October 1, 2020 must be reduced by 5.70% from the original statutory amounts.

**Conditions.** In exchange for receiving a TEACH Grant, you must agree to serve as a full-time teacher in a high-need field in a public or private elementary or secondary school that serves low-income students (see below for more information on high-need fields and schools serving low-income students). As a recipient of a TEACH Grant, you must teach for at least four academic years within eight calendar years of completing the program of study for which you received a TEACH Grant. **IMPORTANT:** If you fail to complete this service obligation, all amounts of the TEACH Grants that you received will be converted to a Federal Direct Unsubsidized Stafford Loan. You must then repay this loan to the U.S. Department of Education. You will be charged interest from the date the grant(s) was disbursed.

### Student Eligibility Requirements at CMU:

- Complete the Free Application for Federal Student Aid (FAFSA), although you do not have to demonstrate financial need.
- Be a U.S. citizen or eligible non-citizen.
- Be accepted into the undergraduate Teacher Education program or into the Graduate Studies Master of Arts in Special Education or Master of Arts in Reading and Literacy program and have a signed elementary or secondary education major or minor in a high-need subject.
- Have a cumulative GPA of at least 3.25 and maintain that GPA throughout your academic program (or score above the 75th percentile on a national standardized college admissions test).
- Complete TEACH Grant entrance counseling each year at: <https://studentaid.gov/>.
- Complete TEACH Grant exit counseling at: <https://studentaid.gov/>.
- Sign a TEACH Grant Agreement to Serve and Promise to Pay each year at <https://studentaid.gov/>.

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- Undergraduate students are eligible only if they are pursuing their first undergraduate degree. Students pursuing a second undergraduate degree, teachers working on teacher certification and graduate students who have a “conditional admission” status are NOT eligible for the TEACH Grant. Graduate students are eligible only if they are pursuing a Master of Arts in Special Education or a Master of Arts in Reading and Literacy degree.

- **NOTE:** CMU has determined the following major is NOT eligible for a TEACH Grant because students will be unable to fulfill the teaching requirements:

*B.S. in Education - Elementary Standard Certificate students who do not have a high-need field major or minor.*

- Sign a TEACH Grant Agreement to Serve (see below for more information on the TEACH Grant Agreement to Serve).
- To initiate application for the TEACH Grant, students must contact the EHS Office of Educator Preparation Programs, EHS 421, Central Michigan University, 989-774-3309.

#### High-Need Field

High-need fields are the specific subject areas identified below:

- Bilingual Education and English Language Acquisition.
- Foreign Language.
- Mathematics.
- Reading Specialist.
- Science.
- Special Education.

Other identified teacher shortage areas as of the time you begin teaching in that field. These are teacher subject shortage areas (not geographic areas) that are listed in the Department of Education's Annual Teacher Shortage Area Nationwide Listing at <https://www2.ed.gov/about/offices/list/oep/pol/tsa.html>.

**Schools Serving Low-Income Students.** Schools serving low-income students include any elementary or secondary school that is listed in the Department of Education's Annual Directory of Designated Low-Income Schools for Teacher Cancellation Benefits at <https://studentaid.gov/app/tcli/action>.

**Teach Grant Agreement to Serve.** Each year you receive a TEACH Grant, you must sign a TEACH Grant Agreement to Serve that will be available electronically on a Department of Education Web site. The TEACH Grant Agreement to Serve specifies the conditions under which the grant will be awarded, the teaching service requirements, and includes an acknowledgment by you that you understand that if you do not meet the teaching service requirements you must repay the grant as a Federal Direct Unsubsidized Loan, with interest accrued from the date the grant funds were disbursed. Specifically, the TEACH Grant Agreement to Serve will provide that:

- For each TEACH Grant-eligible program for which you received TEACH Grant funds, you must serve as a full-time teacher for a total of at least four academic years within eight calendar years after you completed or withdrew from the academic program for which you received the TEACH Grant.
- You must perform the teaching service as a highly-qualified teacher at a low-income school. The term highly-qualified teacher is defined in section 9101(23) of the Elementary and Secondary Education Act of 1965 or in section 602(10) of the Individuals With Disabilities Education Act.
- Your teaching service must be in a high-need field.
- You must comply with any other requirements that the Department of Education determines to be necessary.

If you do not complete the required teaching service obligation, TEACH Grant funds you received will be converted to a Federal Direct Unsubsidized Stafford Loan that you must repay, with interest charged from the date of each TEACH Grant disbursement.

## Employment for Students

Job opportunities on campus are available to CMU students enrolled at least half-time each semester, regardless of financial need. Job opportunities extend to most areas of university activity. Pay rates are commensurate with federal minimum wage guidelines. Students are paid once every two weeks for hours worked. Employment in moderation can be beneficial to a student's educational experience, and earnings can often reduce or eliminate the necessity to borrow. Approximately 2,000 students work on campus earning over \$8 million yearly.

### Federal Work Study Employment (FSW)

The university participates in the Federal Work Study Program (FWS). Students must be U.S. citizens or U.S. permanent residents and meet all other requirements included in the Financial Aid Eligibility section. Students must be enrolled at least half time.

Once students have earned the amount for which they are eligible, it is for the employing department to determine if students will remain employed and paid from another funding source.

Students are not required to accept a job offer in order to receive other types of aid. If students want to replace all or part of the value of the job offered with a loan, they must write to or make an appointment with a financial aid advisor to discuss this option. Substitution of a loan for a job assignment can occur if loan funds are available.

Summer employment for Federal Work Study students may be available on campus. Students must file the FAFSA for the succeeding year in order to be determined eligible.

### General Student Assistance Employment (GSA)

Other student jobs are available on campus in addition to those expressly paid for through Work Study Programs. General Student Assistance positions are funded through the university. Half-time enrollment status is required for employment under GSA.

### Work Hour Limitation

Student employees are allowed to work 40 hours per pay period (all jobs combined) during the academic year and 80 hours per pay period in summer. Student employees must inform supervisors of all CMU work assignments and are expected to self-monitor the total hours they work for each pay period.

### Off-campus Employment

Businesses and individuals in the Mt. Pleasant and surrounding areas utilize the Student Employment Office to advertise available part-time positions through up-to-date job postings. Positions can include everything from house cleaning, pet sitting, and yard work to short-term, part-time, or seasonal work in personal businesses, restaurants, and summer camps.

## Loan Programs

Several loan programs are available. A student is not required to accept a loan in order to receive other types of aid. Students may consider replacing part of the value of a loan with a job. Contact Student Employment to determine whether employment is available.

Students accepting student loans are committing themselves to a serious legal and moral obligation: loans must be repaid. Repayment may take ten years or longer after leaving Central Michigan University. Students are urged to consider their ability to repay a loan, their future credit rating, and their potential indebtedness before accepting a loan. The staff of the OSFA are available to discuss the implications of loans on the student's future financial situation.

### Federal Stafford Direct Loan Program

**Subsidized Loans.** Subsidized loans are made to a student by the federal government and applied directly to the student's account. These loans are based on need, and eligibility is determined by the OSFA. All applicants must file a FAFSA. Loan applications are not required. CMU will initiate processing unless the student declines the suggested Federal Direct Loan on the award statement.

Undergraduate students making satisfactory academic progress who carry at least six (6) semester hours may borrow up to \$3,500 for the first year of undergraduate study, \$4,500 for the sophomore year, and \$5,500 for the junior and senior years of undergraduate study, depending on financial need. The subsidized loan aggregate maximum for undergraduate study is \$23,000. Application is usually made for one semester or an academic year (9 months). Summer is the end of our academic year. Summer aid will be offered after you have registered for summer courses.

Repayment begins six months after ceasing to be enrolled at least half-time. Several repayment options are available; contact your federal servicer. Payment of principal may be deferred under certain conditions. Refer to your promissory notes for details.

**Unsubsidized Student Loans.** Provisions are the same as the Federal Direct Subsidized Loans, except that the loan is not based on need. The program is open to students who do not qualify for the Federal Direct Subsidized Loan or who do not qualify for the full amount. The student is responsible for the interest that accrues while enrolled in school. Dependent students who demonstrate financial need for a subsidized loan based on grade level may borrow up to \$2,000 in an unsubsidized loan, not to exceed the cost of attendance. Independent students may borrow the Federal Direct Subsidized Loan limits as well as an additional Federal Direct Unsubsidized Loan up to \$6,000 per year for freshmen and sophomores and up to \$7,000 per year for other independent undergraduates, not to exceed the cost of attendance.

The aggregate maximum for undergraduate study is \$31,000, which may be a combination of subsidized and unsubsidized loans. The aggregate maximum for an independent undergraduate student is \$57,500.

### Direct PLUS (Parent) Loans

The Federal Direct PLUS Loan program makes loans available to parents to pay for the costs of study at postsecondary schools. Under the program parents are eligible to borrow on behalf of dependent undergraduate students. Loan funds may be used only to pay for students' educational costs. The maximum eligibility for a Federal PLUS equals the cost of attendance minus estimated financial aid for the loan period. All applicants must file a FAFSA for the student for whom they wish to borrow and complete the PLUS loan application online at <https://studentaid.gov/>. Processing will be initiated when the parent borrower provides requested information for the promissory note. Upon receipt of the signed promissory note, funds will be deposited to the student's account. The federal servicer is required to check the credit worthiness of all Federal Direct PLUS Loans applicants.

Parents may choose to defer payments on a PLUS loan until six months after the date the student ceases to be enrolled at least half time and pay accruing interest monthly or quarterly, or allow interest to be capitalized quarterly. Interest begins to accumulate at the time the first disbursement is made. Parents may choose to repay both principal and interest while the student is in school or take advantage of deferring payments.

### Loan Counseling

**Entrance Interviews.** Students who have applied for a Federal Direct Student Loan as a first-time borrower are required by federal regulations to complete an entrance interview before their loan funds may be applied to their accounts. Important information on loans, debt management, repayment options and consequences of default will be presented. Information regarding this mandatory session is enclosed with the student's award package. Loan entrance counseling is completed online at <https://studentaid.gov/>.

**Exit Interviews.** Students who receive a Federal Direct Loan are required by federal regulations to complete a loan interview before graduating or withdrawing from the university. Important information regarding deferment and payment schedules will be discussed. Students are contacted electronically to complete on-line exit counseling at <https://studentaid.gov/>. During exit counseling CMU is required to obtain the following information from the borrower:

- expected permanent address,
- name and address of the borrower's expected employer,
- address of the borrower's next of kin,
- any corrections to CMU's records concerning name, address, social security number, references, and driver's license number.

For Federal Direct loans, CMU is required to provide the above information to the federal servicer within 60 days of the exit counseling completion.

### Loan Agreement (Master Promissory Note/MPN)

The Master Promissory Note is a legal document in which a borrower promises to your loans, accrued interest and fees. The MPN explains the terms and conditions of the loan. You may receive more than one loan under an MPN over a period of up to 10 years. The MPN is completed online at <https://studentaid.gov/>.

### Annual Student Loan Acknowledgment

Borrowers accepting a subsidized/unsubsidized loan or PLUS loan for parents are required to complete the acknowledgment every year. Borrowers acknowledge they understand their responsibility to repay loans. The acknowledgment is completed online at <https://studentaid.gov/>.

## Other Sources of Financial Aid

### Michigan Rehabilitation Services

Michigan Rehabilitation Services (MRS) is an arm of the Michigan Department of Career Development, designed to provide rehabilitative services to vocationally handicapped or impaired individuals.

Any person with an impairment such as an amputation, a cardiac condition, speech problems, deafness, blindness, orthopedic involvements, or epilepsy, can make application for service through Michigan Rehabilitation Services.

All services provided are individually planned to meet the established need and could include, for example: tuition, fees, books, prosthetic devices, maintenance, or other services that would be required for the completion of a rehabilitative program.

A student who feels that vocational rehabilitation services are needed may make inquiry and application for assistance by contacting the office of Michigan Rehabilitation Services in the student's home area.

### Army ROTC Scholarships

ROTC offers a variety of scholarships to the students of CMU. Scholarships differ primarily in the length of time in which the recipient receives the financial assistance. The Army ROTC scholarship program includes a financial benefit package for a period of four, three, and two years. Scholarships are awarded on a competitive basis to the most outstanding applicants, each of whom must: be of good moral character, be a U.S. citizen, be medically qualified, be not more than 31 years of age at graduation, pass the Army fitness test, have no civil convictions (other than minor traffic violations), have a GPA of at least 2.5 (4.0 scale), and possess scholar, athlete, and leader attributes.

Each scholarship pays for college tuition, laboratory fees, on campus educational fees, and a standard amount for the purchase of textbooks, classroom supplies, and equipment. Army ROTC Scholarship winners also receive a tax-free subsistence allowance of \$420 per month for each school year that the scholarship is in effect.

Average Annual ROTC Scholarship	
Tuition	Student's assigned tuition rate x 32 credits
Books, Supplies	\$600.00
Subsistence	\$4,200.00

Additional ROTC scholarship information may be obtained by contacting personnel of the Military Science Department at 989-774-7440 or 989-774-3049. <https://www.goarmy.com/careers-and-jobs/find-your-path/army-officers/rotc/scholarships.html>

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### Reserve Officers' Training Corps (ROTC) Scholarship

Established in 1993 by CMU to provide six room and board awards on an annual basis to high school seniors winning three-year Advance Designee or four-year ROTC Scholarships.

### Bureau of Indian Affairs

Information regarding grants for qualified students of at least one-quarter American Indian descent is available through the U.S. Department of the Interior, Bureau of Indian Affairs at 906-632-6809.

### Indian Tuition Waiver

A Michigan state resident of a U.S. Federally Recognized Tribe who is not less than 25% Indian blood quantum is eligible for free tuition at CMU. Applications are available from the Michigan Department of Civil Rights, telephone 231-439-5247, <https://www.michigan.gov/mdcr/divisions/dei/indian-tuition-waiver>. The student must be enrolled in a degree-granting program.

## Satisfactory Academic Progress toward your Degree

CMU students are required to make progress toward their degree to be eligible for federal and most state and university aid sources. Progress is measured in three ways:

- 1. Required percentage of cumulative attempted credits completed.** Students must successfully complete at least 67% of all CMU credits attempted (including the summer semester).
- 2. Required GPA level.** Students must maintain a 2.00 cumulative GPA as an undergraduate student and a 3.00 cumulative GPA as a graduate student.
- 3. Length of time to complete your degree.** Students must complete all degree requirements within 150% of the minimum number of credit hours required to complete their program of study.

### Satisfactory Academic Progress

Federal regulations (HEA Sec. 484(c)) require that Central Michigan University monitor the satisfactory academic progress of all students *regardless if they have received financial aid in previous semesters*. These financial aid requirements are separate from students' academic requirements. To maintain eligibility for federal student aid, as well as most state and institutional student aid programs, there are three distinct criteria that must be monitored and met.

#### Standards of Satisfactory Academic Progress (SAP)

SAP will be monitored at the end of each semester. A student's eligibility for financial aid may be in jeopardy for the next semester if SAP is not met.

**Quantitative standard:** Complete and pass a minimum of 67% of all attempted hours each semester at CMU.

**Qualitative standard:** Undergraduate students must maintain a 2.00 cumulative GPA and a 3.00 cumulative GPA as a graduate student.

**Maximum time frame standard:** The number of attempted credits in which a student is expected to finish a program cannot exceed 150 percent of the published length of the program (this includes credit hours transferred to CMU). Total credit hour limits apply whether or not the student has actually received financial aid for the entire time at CMU. (124 minimum x 150% = 186 credit hours)

**Credit Hours Passed:** Credit hours passed are defined as having grades of: A, A-, B, B+, B-, C, C+, C-, D, D+, D-, or CR (Credit).

**Credit Hours Not Passed:** Grades of I (Incomplete), W (official Withdrawal), NC (No Credit), Z and X (Deferred Grade) and E (Failing) are not considered as hours passed.

Any of these may negatively impact your completion percentage as well as count towards maximum credit hours attempted.

Repeated, remedial, and incomplete credits count as assessed credits. Even though a repeated course will count only once toward the student's academic requirements and the student's GPA, each repeat is assessed separately and counts separately for aid purposes.

**Change of Grade:** Courses that were graded at the end of the semester, but which are changed later by the instructor due to an appeal or error may impact the GPA as well as the pace calculation. These grades will be reassessed at the next evaluation point of SAP, or the student can appeal their SAP status to be reviewed.

Courses that move from a deferred or an incomplete status to completed will be reassessed at the next evaluation point of SAP, or the student can appeal their SAP status to be reviewed.

Audit courses receive no credit and do not influence grade point average. They are not counted in attempted credits and are not eligible for financial aid.

**Change of Major/Double Major/Extended Programs/Second Bachelor's Degree/Transfer Credit:** If a student elects to double major, complete more than one degree and/or start a degree then change majors, all credits previously attempted will count towards SAP.

Transfer credits from a previous school count toward credit hour limits.

Students may not receive financial aid beyond 6 semesters (or the part-time equivalent of 6 semesters) of enrollment in the second undergraduate degree program or teacher certification program.

Students in graduate programs may not receive financial aid if they have exceeded the published time limits as outlined in the CMU Graduate Bulletin for master, doctoral, or professional programs.

**Dropping or Withdrawing from Courses:** Reducing a student's enrollment may have serious consequences.

Students who withdraw from all classes in a semester may be required to return some or all financial aid paid to their student account.

Dropping or withdrawing from classes after the drop/add period will negatively impact the student's 67% completion rate and the credits will be included in total attempted hours.

If a student is considering dropping or withdrawing should contact the Office of Scholarships and Financial Aid to determine how this may impact their financial aid.

**Review Procedures:** The Office of Scholarships and Financial Aid will review all SAP standards for all students at the end of each semester. Students who received financial aid during the semester and do not meet one or more standard will be notified via their CMU email address.

### SAP Status

#### Satisfactory

- The student met all standards for financial aid.
- The student is eligible for financial aid.

#### Warning

- The first semester a student falls below with the 67% completion rate, or the 2.00 cumulative GPA for undergraduate or 3.00 for graduate students; and the overall attempted credits do not exceed 150% of the program length
- The student is eligible for financial aid, however, must meet SAP standards at the end of the following semester of warning.

#### Denial/Suspension

- The student has not met one or more of the standards.
- Is not eligible for financial aid.
- May regain eligibility for financial aid if the student is either:
  - Able to bring their academic record within the standards (bring cumulative GPA to meet required standard, or is able to bring completion percentage over 67%) or
  - Files a Satisfactory Academic Progress Appeal, and that appeal is approved.



### Probation

- The student has not met one or more of the standards for SAP and is not eligible for warning status; has filed an appeal which has been approved on the condition that all standards of SAP will be met by the end of the semester.
- Student is eligible for financial aid for the semester of probation.

### Academic Plan

- The student has not met one or more of the standards and is not eligible for warning status; has filed an appeal which has been approved.
- Student is eligible for financial aid for the semester in which the appeal was approved.
- Will maintain eligibility for future semesters if the student meets the terms of the academic plan, or meets the overall SAP standards by the end of the semester.

### Regaining Financial Aid eligibility

A student can regain eligibility by successfully completing the following:

1. Complete a semester without the benefit of financial aid; and
2. Achieve a minimum GPA of 2.0 for undergraduates (3.0 for graduates); and
3. Complete 67% of attempted credits

### Appeal Process

If the student has received a financial aid denial notification, the student may appeal for reinstatement of their financial aid eligibility based on extenuating circumstances. An SAP appeal must be submitted by the appeal deadline dates noted below.

Examples of appealable mitigating circumstances are: death or serious illness of an immediate family member, serious illness of student, or other major family catastrophe.

All appeals must:

- be submitted using the CMU Financial Aid Satisfactory Academic Progress Appeal form available on the CMU OSFA website
- include the required documentation.
- be submitted to the Office of Scholarships and Financial Aid no later than the following dates:
  - receiving aid in Fall 2022, appeal by October 1, 2022
  - receiving aid in Spring 2023, appeal by February 1, 2023
  - receiving aid in Summer 2023, appeal due by July 1, 2023

In most cases a decision will be made within 15 business days of receiving an appeal letter and the appropriate documentation. Students are notified of appeal decisions in writing or through their CMU e-mail account.

If an appeal for a student on Financial Aid Denial/Suspension status is approved, the student will be placed on **Financial Aid Probation** for one semester and may continue to receive federal student aid for one semester. If at the conclusion of the Financial Aid Probation semester, Satisfactory Academic Progress standards are not met, as outlined below or according to the student's academic plan, the student will be placed on **Financial Aid Denial/Suspension** and become ineligible for Federal Student Aid.

Students should be prepared to seek other funding options if the appeal is not approved. Students may regain federal aid eligibility by completing the requirements list under Regaining Financial Aid eligibility.

Appeals must be submitted by the due dates listed on the appeal form. Late appeals will not be processed.

*If for any reason the OSFA fails to provide an intended notification, this does not relieve the student from the obligation of continuing to maintain satisfactory academic progress or from any other requirements of the financial aid program.*

### Summer Semester Processing of Satisfactory Progress

If students are currently on financial aid warning, probation or denial and they request summer aid, their file is on HOLD until spring grades are posted and OSFA can confirm if the student has met the requirements to be cleared. If the student has not met the requirements they will go on denial (or remain on denial if already there), and **not** be eligible for summer federal aid.

Due to the timing of final grade posting for spring semester, students currently on warning, probation or denial will not have their summer aid processed and paid out in time for the FIRST summer disbursement.

**Please note: students who successfully complete Summer I term while on denial, are NOT eligible for federal aid for Summer II term – they are on denial for the entire Summer semester.**

## Statement of Student Financial Aid

### Rights and Responsibilities

1. Students have the right to be informed of and to apply for all financial aid programs for which they are eligible and the responsibility to apply by program deadlines and to acquaint themselves with the application procedure.
2. Students have the right to know how financial need and award packages are determined and to request a review of the financial aid package should circumstances change to negatively affect the family's ability to meet costs of attendance, and the responsibility to notify the university should new resources become available to the student that were not originally considered.
3. Students who borrow have a right to full disclosure of the terms and provisions of loan programs, including typical repayment schedules and the responsibility to participate in an online exit interview before leaving the university. They must repay loans on a timely basis and keep the university informed of their current address.
4. Students have the right to be informed of financial aid policies and have the responsibility to be aware of and comply with all published financial aid policies and to comply with these policies.
5. Students have the responsibility to submit accurate information on all university documents relating to the financial aid application process.

## Endowed Scholarships and Awards

Named funds are designed to acknowledge a person or persons with a special relationship to CMU while strengthening the university's student financial aid program, academic programs or administrative services. The accounts are sometimes named in honor of, or in memory of, loved ones. Named endowed awards and scholarships are listed on the following pages of the Bulletin.

### Central Michigan University Scholarship Programs

Privately funded endowments provide supplemental funding to students based on need, academic focus, career aspirations or other specific criteria. Many of the endowed scholarships available for students are awarded by academic departments. A listing of the academic departments awarding scholarships is available on the Office of Scholarships and Financial Aid web page.

Remaining scholarships that are awarded by the Office of Scholarships and Financial Aid are generally awarded in the spring and summer for the next academic year. Most endowed scholarships require the student to be an undergraduate and enrolled full time (12 hours) in a degree-granting program on campus. Preference may be given to juniors and seniors of high academic standing with cumulative GPA of 3.0 or higher and demonstrating financial need.

If you receive a Bulletin scholarship and other need-based financial aid, it may be necessary for the Office of Scholarships and Financial Aid to adjust your financial aid package.

(continued)



**AAUW - M. Ruth Evans Award**

Established in 1991 by Jackie M. Evans, members of the M. Ruth Evans family and members of the Mt. Pleasant, Michigan branch of the American Association of University Women (AAUW) in memory of M. Ruth Evans, wife, mother and friend, for a sophomore, junior, senior or graduate student who has been a resident of Isabella County for two or more years and has a GPA of 2.86 or higher.

**Lawrence E. Abbott Endowed Scholarship**

Established in 2004 by Lawrence E. Abbott (Class of 1955). The income from the endowment will support a renewable award for a full-time undergraduate student enrolled in the College of the Arts and Media and majoring in communication. Eligible candidates must demonstrate financial need and maintain an overall GPA of 3.0.

**Harold and Iris Abel Honorary Scholarship**

Established in 1986 by friends of Harold and Iris Abel, who served as president and first lady of CMU between 1975 and 1985.

**Roger Allen Scholarship**

Established by Roger and Margaret Allen, friends of education and CMU.

**Rachel Brink Allwardt Endowed Scholarship**

Established in 2000 by the estate of Rachel Brink Allwardt (Class of 1940). Proceeds from the endowment will be used to establish a scholarship for a junior or senior majoring in child development, accepted into the teacher education program, with a 3.5 minimum GPA.

**Marian Croft Althoff Scholarship**

Established in 1986 by James F. Althoff in memory of his wife Marian Croft Althoff (Class of 1951) for a student majoring in English.

**Alumni Gold Scholarship**

The Alumni Gold Scholarship was established in 1999 to benefit children and grandchildren of CMU alumni. Applicants must be freshmen or transfer students who meet criteria for admission to CMU. Recipients will be recommended by the CMU Alumni Association Board of Directors with final approval by the Director of Alumni Relations.

**American Mitsuba Corporation Endowed Scholarship**

Established in 2009 by American Mitsuba Corporation and its affiliate CME, LLC. Income from the endowment will support a renewable award for a student majoring in the electrical or mechanical engineering program in the College of Science and Engineering with a minimum GPA of 3.0. Preference will be given to qualified CME and related company associates and their immediate family members.

**Arthur Andersen Endowed Fund in Accounting**

Updated in 2006, income from the endowment will support a fund for two areas in the School of Accounting: student scholarships and faculty research. Recipients of the scholarship must be incoming freshmen who intend to enroll in the College of Business Administration with an accounting major, have a minimum 3.5 GPA and minimum ACT composite of 25. Faculty recipients will be awarded a summer stipend for conducting valuable research or research projects. More information is available in the College of Business Administration.

**Jack and Patricia Anson Endowed Scholarship**

Established in 2005 by Todd '77 and Teresa '74 Anson in honor of Jack '50 and Patricia '47 Anson. Income from the endowment will be used to support an undergraduate or graduate scholarship for a graduate of Mount Pleasant Public Schools. The recipient must have a minimum GPA of 3.0 on a 4.0 scale.

**Charles L. and Mary Fisher Anspach Scholarship**

Established in 1994 through a conversion of a loan fund in memory of Central's distinguished fifth president and in memory of Mrs. Anspach who served the university for 20 years with distinction and grace as the wife of President Anspach (1939 to 1959) for sophomore, junior or senior students with a 3.0 or higher GPA. Contact the Carlin Alumni House for more information.

**Charles E. Anthony Scholarship**

Established in 1999 by friends and family in memory of Charles E. Anthony, former WCEN owner and prominent Mt. Pleasant businessman, for a journalism major or minor who is an active member of the CM Life staff with a minimum GPA of 2.75.

**Suzanne and Raymond Baber, Jr. Endowed Scholarship for Beaver Island Students**

Established in 2007 by Suzanne Baber (Class of 1948, 1952) in memory of her husband Raymond Baber, Jr. Income from the endowment will support a scholarship for a biology major or minor with a minimum GPA of 3.0 to be used for tuition, room and board, books, and travel related expenses for a student taking a class at the CMU Biological Station on Beaver Island.

**The Suzanne and Raymond Baber, Jr. Endowed Scholarship in Teacher Education**

Established in 2002 by Suzanne Baber (Class of 1948, 1952) retired counselor, and Raymond "Bud" Baber, Jr., retired automobile advertising executive. Proceeds from the endowment will be used to support scholarships for juniors or seniors enrolled in the College of Education and Human Services, Department of Teacher Education, with a 3.0 minimum GPA. Preference will be given to students who demonstrate financial need.

**Suzanne Baber Endowed Scholarship for Teacher Education Study Abroad**

Established in 2018 by Suzanne L. Baber '48. Income from the endowment will support a non-renewable scholarship for a student admitted to the Teacher Education program within the College of Education and Human Services to participate in a study abroad program at an international destination. Recipient will have a cumulative minimum GPA of 3.0 and will demonstrate financial need.

**Ron and Susan Bacon Outdoor Recreation Award**

Established in 2006 by Ron and Susan Bacon in honor of their parents, Ronald and Sophia Bacon. Income from the endowment will support a scholarship for a junior or senior enrolled in the Department of Recreation, Parks, and Leisure Services with a major in outdoor and environmental recreation.

**Ruby Leora Balduf Endowed Scholarship**

Established in 2002 by the estate of Ruby Leora Balduf (Class of 1928). Proceeds from the endowment will be used to fund a renewable scholarship for a student enrolled in the College of Education and Human Services with a GPA of 3.0 or higher and demonstrated financial need.

**William S. Ballenger, III and Dr. William P. Browne Capitol Internship Program Endowment**

Established in 2007 by friends and family of William S. Ballenger, III and Dr. William P. Brown, former CMU employees, to honor their service and dedication in the area of political science at CMU. The endowment recognizes Bill Ballenger's service as the Robert and Marjorie Griffin Endowed Chair in American Government from 2003-2007. The endowment also honors Dr. Bill Browne as a respected friend, colleague, and mentor to the political science department and the College of Humanities and Social and Behavioral Sciences. Income from the endowment will support a renewable internship for an undergraduate or graduate student enrolled in the political science academic program or who has an interest in the study of political science and who has a minimum GPA of at least 3.0.

**Sue Schrier Bancroft Endowed Music Fund**

Established in 2004 by Sue (Class of 1972) and Chris Bancroft. Income from this endowment will support the School of Music by way of faculty development, scholarships, supplies and equipment, program support and guest artists and/or guest speakers. When used for scholarships, the recipients will be students who demonstrate outstanding promise in their field as determined by a School of Music scholarship committee.

**Fay and Genevieve Barhitte Outstanding Student Award**

Established in 1988 by Fay and Genevieve Barhitte for juniors within the Department of Teacher Education and Professional Development.

**Stephen Barstow Memorial Art Prize**

This renewable scholarship will be awarded to an outstanding undergraduate or graduate student who is a member of a state or federally recognized tribe majoring in art, enrolled at CMU. The applicant must have a cumulative minimum GPA of 2.5 or higher for a freshman, 3.00 or higher in Art for transfer or CMU students. The applicant must submit samples or slides of art work along with a statement of their creative achievements and goals. Applications and guidelines are available at the Department of Art. If no recipients are eligible, may be awarded to any art major.

**Stephen Lawrence Barstow Native American Prize**

Established in 1993 through the estate of Stephen Lawrence Barstow for the outstanding art student.

**John and Jennie Bastow Scholarship and Olson L. Anderson and Catherine Bastow Anderson Scholarship**

Established in 1986 through the estate of Olson and Catherine Anderson for undergraduate students with an above average grade point and need of financial assistance. First preference is given to students from Bay County, MI.

**James O. Beard, Jr. Scholarship**

Established in 1994 by family and friends in memory of James O. Beard, Jr., '91, who was an accounting instructor and served as faculty advisor for the Student Accounting Society. The recipient will be a junior or higher status, majoring in accounting, with a cumulative minimum GPA of 3.0 and preference will be given to an active member of an accounting-related RSO.

**E.C. Beck English Scholarship**

Established by Dr. Earl C. Beck, former chairman of the Department of English Language and Literature, for an English major. First preference is given to juniors and seniors on the basis of scholarship, need and probable teaching success.

**Joseph and Selma Bell Scholarship**

Established in 1959 by Joseph and Selma Bell of Riverdale, IL, longtime friends of CMU, for worthy and patriotic students.

**Nancy Heller Bender When The Going Gets Tough Scholarship**

Established in 2021 by Nancy Heller Bender '85 to support hard-working students with financial need. Nancy wanted to honor her father by capturing a part of one of his many sayings, "When the going gets tough, the tough get going," and would like to help those students who demonstrate the same grit and determination as shown in this saying. Income from the endowment will support a renewable award for junior or senior level undergraduate students enrolled in the College of Business Administration demonstrating financial need with a cumulative minimum GPA of 3.3. Preference will be given to a Michigan resident from a rural community.

**Jack and Nancy Benedict Endowed Award**

Established in 2010 by Jack (Class of 1967, 1969) and Nancy Benedict. Income from the endowment will support an alternating award for a student enrolled in the College of Business Administration and College of the Arts and Media. Recipient must have a signed major in business or journalism and have a minimum GPA of 2.5.

**Frances E. Rogers Benson Scholarship**

Established in 1988 by the family of Frances E. Rogers Benson, CMU Life Certificate in 1928, for students with a GPA of 2.8 or higher as selected from East Jordan High School or Charlevoix County high schools.

**Bettisworth Endowed Scholarship in Directing**

Established in 2005 by Denny and Linda Bettisworth and friends. Income from this endowment will be used to fund a renewable scholarship for a junior or returning senior who has demonstrated outstanding promise in theatre directing, as determined by the chair of the Department of Theatre and Dance in consultation with the Office of Scholarships and Financial Aid.

**Biological Station Scholarship**

Tuition awards are available to students taking courses at the CMU Biological Station at Beaver Island, MI. Contact the director of the biological station for further information.

**Department of Biology Scholarship**

Established in 1989 for one freshman and one transfer student pursuing a biology major. Freshmen scholarships are renewable for up to three additional years if eligibility is maintained. Apply within the Department of Biology.

**Suzanne Rae and Walter James Bisard Endowed Scholarship**

Established in 2006 by Walt Bisard '66, '67 for his wife Suzanne '75, '87 in honor of her 26 years of outstanding elementary science teaching career and also for their 40th wedding anniversary. Income from the endowment will support a renewable award for a sophomore, junior or senior with a minimum GPA of 3.0. Recipient will be pursuing a career in Elementary Science Teaching, Middle School Science Teaching or High School Physics Teaching. The award may be used for CMU tuition, travel to science meetings, conferences or membership in science organization(s).

**Paul M. Bishop and Family Endowed Award**

Established in 2003 by Paul M. Bishop and family. Paul M. Bishop was a 1940 CMU graduate and first established this loan fund in 1972. Members of the Bishop family have been long-time residents of Mount Pleasant and strong supporters of Central Michigan University. Three generations of Mr. Bishop's family have attended and graduated from CMU - daughters Susan B. Johnston, Lucinda B. McCoy and granddaughter Jennie A. McCoy. This renewable award will benefit a junior or senior enrolled in the College of Liberal Arts and Social Sciences who is pursuing a degree in social work and who has a minimum GPA of 3.25. First preference will go to a student who can demonstrate financial need.

**Barbara Bissot Endowed Scholarship**

Established in 2007, the endowment was created by Dr. Barbara Bissot, a former professor in the Department of Teacher Education and Professional Development at CMU, through her estate. Income from the endowment will support a renewable scholarship for a student with a minimum GPA of 3.3 enrolled in the College of Education and Human Services, Department of Teacher Education and Professional Development.

**The Kate Elizabeth Black '20 Educational Scholarship**

Established in 2021 by family and friends in memory of Kate Black, a 2020 graduate who greatly loved teaching and Central Michigan University. Kate was an Early Childhood Education major with a ZS endorsement. She came from a family of educators and was a natural with children. Income from the endowment will be used to support an award for a senior enrolled in the College of Education and Human Services pursuing a Z.S. endorsement (or equivalent) seeking a degree in Early Childhood Development.

**Mary Ellen and George M. Blackburn Choral Scholar Endowment**

Established in 2006 by Mary Ellen Blackburn in memory of her husband, George M. Blackburn. Income from the endowment will support a student with a music major. Recipient will become the St. John's Episcopal Church Choral Scholar and will participate in the St. John's Episcopal Choir and become acquainted with sacred choral literature from the 16th to 21st centuries. Visit the College of the Arts and Media, School of Music for further details.

**Nancy Martin Bleier Endowed Scholarship**

Established in 2015 from the estate of Brenton A. Bleier, spouse of Nancy Martin Bleier '64. Income from the endowment will support a renewable scholarship for a student enrolled in the College of Education and Human Services majoring in elementary education and, who has maintained a class rank in the top 35%. Preference will be given to graduates of Mt. Pleasant, Michigan High School admitted to the Elementary Education program (or self-identified as pursuing elementary education) at CMU maintaining class rank in top 35% of CMU class (or in case of freshmen, top 35% of high school graduating class).

**Michael Bluhm Family Undergraduate Award**

Established in 2021 by Michael Bluhm '02 with special consideration given to students who have demonstrated experience in or commitment to their education and advancement beyond the classroom. The intention is to award an "average" student who shows active engagement within a community through volunteerism, job, and RSO participation. Income from this endowment will support a renewable award for a full-time sophomore or higher student within any major at CMU with a cumulative minimum GPA of 2.5. Preference will be given to a student who demonstrates need while having commitments beyond the classroom, such as those who show active engagement within a community such as volunteerism, job, and/or RSO participation and also to those students from a single-parent household.

**David & Dawn Boechler and Michael & Caroline Hilley Endowed Scholarship**

Established in 2019 by David '70 and Dawn Boechler. Income from the endowment will support a renewable scholarship for a full-time junior or higher undergraduate student who demonstrates financial need and has a cumulative minimum GPA of 3.0 or higher. Student will be majoring or enrolled in one of the following: Bachelor of Nursing Program, Psychology, Social Work, Health Administration or Dietetics.

**Bohannon Family Endowed Scholarship Fund**

Established in 2004 by Lon M. (Class of 1975) and Vicki J. Bohannon. Income from this endowment will be used to fund a renewable scholarship for a full-time undergraduate student enrolled in the College of Business Administration with preference for accounting or international business major. Recipient must maintain a 3.0 overall GPA and demonstrate financial need.

**Bohl Family Scholarship**

Established in 2021 by Roger Bohl '67. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration demonstrating financial need.

**The Daniel L. Bookey Endowed Award**

Established in 2008 by friends and colleagues in honor of Daniel L. Bookey, emeritus CMU athletics equipment manager. Income from the endowment will support an award for a student equipment manager in their sophomore year or higher who best epitomizes the character traits of Dan Bookey: selflessness, dedication, integrity, and love of the game. Student must maintain 2.5 or higher GPA.

**Duane Mark Bouliw History Award**

Established in 1990 by family and friends in memory of Duane Mark Bouliw, CMU senior killed at age 21 in an automobile accident December 16, 1989, for a junior or senior who has earned at least 12 credit hours in history with a minimum 3.25 GPA; has a 3.0 or higher overall GPA; and preferably is a member of CMU's History Club and Phi Alpha Theta, or active in other campus or community organizations.

**Jennifer H. Bourque Memorial Award**

Established in 2014 by Jeremy Bourque and friends and family in memory of his sister Jennifer Bourque, a 2004 Journalism alum. Income from the endowment will support a renewable award for a photojournalism major with a minimum 2.5 GPA demonstrating financial need from the state of Michigan. Preference will be given to a single parent.

**Norvall C. and Evelyn Gagnon Bovee Scholarship**

Converted in 1995 from a loan fund established in 1971 to commemorate Norvall C. Bovee's 30 years of dedication, service, loyalty and positive effect on CMU as assistant and director of the Keeler Union, business manager, controller and vice president of business and finance between 1940 and December 11, 1970. Annual spendable investment income will be awarded to biology majors studying at the CMU Biological Station at Beaver Island, MI. Application may be made through the Department of Biology.

**Bill Boyden Leadership Award**

Established in honor and memory of W.B. ("Bill") Boyden by family members and friends. Bill Boyden well reflected during his lifetime a unique blend of leadership, community concern and involvement, athletic ability and diverse other talents. The purpose of the award is to foster and recognize similar interests and abilities in deserving students.

**Roger and Nancy Bradshaw Endowed Award**

Established in 2014 by Roger '75 and Nancy Bradshaw. Income from this endowment will support a renewable scholarship for a full-time junior or above student who is an instrumental music major from the western part of Michigan; with a minimum 2.7 GPA.

**Brannan Family Scholarship**

Established in 2010 by family and friends in memory of Samuel J. Brannan '59, '62, mathematics professor at Central Michigan University for 38 years. Income from the endowment will support a renewable award for a full-time junior or senior admitted to the Secondary Mathematics Education program in the College of Science and Engineering, Science Education programs with a minimum 3.0 GPA.

**William Brehm, Sr. Scholarship**

Established in 1988 by William Brehm for a junior or senior pursuing a business administration degree with a major in hospitality services administration.

**Brewer-Brown-Marsh Endowed Award**

Established in 2004 to honor Patricia Brewer, Lewis Brown and Trena Marsh. Income from the endowment will be used to support a renewable scholarship for a student(s) who graduated from a high school in Michigan and who can demonstrate financial need and commitment to the advancement of African-Americans in the professions.

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**Laurel Wood Brice Endowed Award**

Established in 2007 by Pat Loers in memory of her mother, Laurel Wood Brice. Income from this endowment will support a scholarship for a full-time junior or senior enrolled in Early Childhood Development Program in the elementary education program with a GPA of at least 3.0. Preference will be given to students from Mecosta or Isabella County.

**Reverend Lloyd C. and Ica L. Bronson Memorial Award**

Established in 2002 by Larry Bronson, CMU emeritus faculty member, to honor his parents, the Reverend Lloyd C. and Ica L. Bronson. Proceeds from the endowment will be used to establish a renewable scholarship for a senior student enrolled in the College of Liberal Arts and Social Sciences majoring in English with a GPA of 3.5 or above. Recipient will provide documented work with minority groups.

**Chester J. Brown Scholarship**

Established in 1984 by family, friends, and trust of Chester James Brown (Class of 1934), lifelong resident of Isabella County, for a student within the Colleges of the Arts and Media or Science & Engineering.

**Edward C. Brown Memorial Prize**

Established in 1991 by CMU faculty, staff, students and friends in memory of Edward C. Brown, director of CMU Health Services from 1978 to 1990, in recognition of the outstanding leadership he provided to health services, the Division of Student Affairs and the university in general. Award to be for sophomore, junior or senior students who have a cumulative GPA of 3.0 or higher in health education.

**Kathryn L. Brown Award**

Established in 1998 by friends and family in memory of Kathryn (Kate) L. Brown, a junior in the Hospitality Services Administration program who died while doing her internship. Recipient will be a full-time student majoring in hospitality services administration with at least one full semester remaining before graduation with a minimum GPA of 2.5.

**Keisha Y. Brown Angel Wings Fund**

Established in 2016 by Damon M. Brown '06, family and friends in memory of Keisha Y. Brown. Income from the endowment will support a scholarship for a student whose family is or has experienced financial hardship due to the excessive costs and other related expenses of treating family cancer patients. This could possibly be the student themselves. Recipient will be a sophomore or higher in good academic standing.

**BrownOtter Scholarship for Earth and Atmospheric Sciences**

Established in 2021 from the estate of Ivan A. (LaCore) BrownOtter '64, '70. Ivan left a legacy of supporting fellow writers and spent much of his time reading poetry and volunteering with children and senior citizens. Ivan also had an interest in clean air and clean water which stimulated his interest in supporting Environmental Science, Geology, and Meteorology. Income from the endowment will support a renewable award for a student enrolled in the College of Science and Engineering, in the department of Earth and Atmospheric Sciences who is seeking a degree in Environmental Science, Geology, or Meteorology. The recipient will demonstrate financial need with a cumulative minimum GPA of 2.2.

**Betty A. Brubaker Family of Heroes Scholarship**

Established in 2014 by Steven A. Rellinger '85, '96, family and friends in honor of his mother, Betty A. Brubaker and also John Sheets, Don Rellinger and Herman Wright, members of the United States Military. Income from the endowment will support an award for currently enrolled CMU students who are personnel of the U.S. Armed Forces, National Guard, reserves, or honorably discharged veterans, and/or their respective family members. The recipient(s) must be eligible for Veterans Administration (VA) educational entitlement under chapters 30, 31, 33, 35, 1606 or 1607 and provide a copy of his or her VA Certificate of Eligibility. Recipients also must have a cumulative minimum GPA of 2.5 for undergraduate students and 3.0 for graduate students.

**Mary Lou Bruce Memorial Scholarship**

Established in 1983 by Lieutenant Colonel Gene D. Bruce and friends in memory of Mary Lou, a dedicated military wife and a valued member of the military science and health education families and Mt. Pleasant community. Recipient will be a junior or senior majoring in health and physical education OR Health Sciences who has a cumulative minimum GPA of 3.0 or higher. Preference will be given to applicants enrolled in the ROTC program at CMU.

**Burdon Family Endowed Award**

Established in 2015 by Timothy J. Burdon '57. Income from the endowment will support a renewable award for a junior or higher enrolled in the College of Science and Engineering, with a Chemistry major and a cumulative minimum GPA of 3.0 or higher. Preference will be given to students from Midland County, Michigan.

**Dr. James R. Burley Endowed Scholarship**

Established in 2011 by family, friends and colleagues of the late Dr. James R. Burley, Marketing and Hospitality Services Administration professor. Income from the endowment will support a renewable award for a full-time junior or senior majoring in the College of Business Administration, Department of Marketing, Hospitality, and Logistics with a minimum GPA of 3.0.

**Roy and Alice Burlington Beaver Island Endowed Award**

Established in 2007 by Dr. Roy F. Burlington, professor emeritus, and his spouse, Alice Burlington. The award will support a student participating in an Independent Study in Field Biology on Beaver Island. The recipient will be a Biology major with a GPA of at least 3.0 and a sophomore, junior or senior with financial need.

**Roy and Alice Burlington Endowed Undergraduate Research Biology Scholarship**

Established in 2018 by Dr. Roy F. Burlington, professor emeritus, and his spouse, Alice Burlington. Income from the endowment will support an award for a sophomore or higher biology major with a minimum cumulative GPA of at 3.0. The recipient will demonstrate past participation in university-sponsored undergraduate biological research projects or currently be enrolled in a course in which active participation in undergraduate biological research is the primary purpose of the course.

**Donald Oren Bush Scholarship**

Established by the family in memory of husband and father, Donald O. Bush, professor of Teacher Education and Professional Development, for a junior or senior early childhood and elementary education major with a 2.75 or higher GPA and financial need.

**Marie Donner and Fred R. Bush Scholarship**

Established by Fred R. Bush, family and friends in recognition of Professor Bush, former director of the University Theatre, graduate of CMU and member of the faculty for 33 years. Mrs. Bush was a faculty member in the Department of Music for students of fine arts.

**Nikoline A. Bye Endowed Award**

Established in 2012 from the estate of Nikoline A. Bye '32. Income from the endowment will support an award for a student enrolled in the College of Science and Engineering who is a second semester junior or senior and has been admitted to the teacher education program. First preference will be a mathematics major on the elementary curriculum. The recipient will have a record of academic excellence as demonstrated by a GPA of 3.6 or higher in the mathematics major and have at least one year left before graduation.

**Hugh Calkins Endowed Scholarship**

This scholarship was established in 2002 by the estate of Hugh Calkins '33 in recognition of his family's long association with CMU. Hugh Calkins graduated from CMU in 1933 with a Bachelor of Science in Geography. His father, R.D. Calkins, was the first Chair of Geography at CMU serving from 1902-1944 and Calkins Hall was named in his honor. Hugh Calkins passed away in 2000. This is a renewable scholarship available to sophomores or above enrolled in the College of Science and Engineering with either a signed Geography major, any concentration, or a signed Environmental Studies major. Recipient must have a minimum GPA of 3.25 in GES courses and a 3.25 GPA overall. This is also available to incoming freshman with the intent of pursuing either a Geography major or an Environmental Studies major. No minimum GPA will be required for incoming freshmen.

**Cambridge-Howe-Calkins Scholarship**

The Cambridge-Howe-Calkins scholarship honors all the members of the Cambridge, Howe, and Calkins families who have attended Houghton Lake schools. Many of them have gone on to CMU. The scholarship is endowed by the Cambridge Family for an incoming freshman from Houghton Lake High School. The award will be made based on GPA and involvement in school and community activities. The student must live on campus while attending CMU. If there is not a qualified incoming Freshman applicant from Houghton Lake High School, the scholarship may be granted to transfer students who have graduated from Houghton Lake High School. The campus residency requirement is waived. B) If there is not a qualified incoming Freshman or transfer student from Houghton Lake High School, the scholarship may be granted to a currently enrolled student who is a graduate of Houghton Lake High School. The campus residency requirement is waived.

**Jerry and Felicia Campbell Endowed Scholarship Fund**

Established in 2003 by Jerry (Class of 1962) and Felicia Campbell. Jerry is a current member and past chair of the Central Michigan University Board of Trustees and a member of the Dean's Advisory Board, College of Business Administration. Mr. Campbell is chairman of the board of Republic Bancorp. This endowment will provide funds for incoming freshman who will be participating in the Centralis competition and who intend to pursue a degree in business. Recipients will have a minimum GPA of 3.5 and a composite ACT score of at least 28. Recipients will be expected to join a business student organization, participate in a mentoring program, and reside in the College of Business Administration's residential college in their freshman year. This scholarship is renewable if recipients maintain a minimum 3.25 GPA and make satisfactory academic progress toward their major and degree program.

**Jeffrey R. Caponigro Endowed Scholarship**

Established in 2000 by Jeffrey Caponigro '79, President and CEO of Caponigro Public Relations, Inc. Proceeds from the endowment will be used to establish a renewable scholarship for an incoming freshman regardless of major. The recipient must have demonstrated financial need and a cumulative minimum GPA of 3.0. Intended to provide up to a full scholarship for tuition, fees, and room and board after federal and state grants and other university financial aid is applied.



**Professor Joseph P. Carey Scholarship**

Established in 1988 by Colonel Alfred Asch (Class of 1950) and Naomi I. Asch of Rockville, MD, in recognition of the positive effect Joseph P. Carey had on students during his career at CMU for a scholarship with preference given to students from Beaverton High School (MI), then Gladwin and Midland counties before other Michigan counties.

**Dr. Leslie O. Carlin Scholarship Endowment**

Established by Dr. Leslie O. Carlin, a guidance counselor at CMU for 33 years. He and his wife Margo, a housemother, lived in a residence hall for 25 years. The Carlin Alumni House was dedicated to them in 1993. This endowment will provide funds for incoming freshman and community college transfer students who demonstrate financial need. Preference will go to students who, because of family and financial responsibilities, were prevented from participating in extra-curricular activities that might otherwise have qualified them for financial aid. This scholarship is renewable.

**Paul G. and Sophia H. Cartwright Scholarship**

Established in 1987 by Veronica L. (Cartwright) Telfer (Class of 1970, MA 1975) and Lawrence Cartwright, (1965, MA 1974, and Ed.S. 1975) in memory of their parents, Paul G. and Sophia H. Cartwright, for a junior or senior pursuing an elementary or secondary education profession.

**Ellen Case Honorary Scholarship**

Established in 1984 by a friend in honor of Ellen Case, Central State Teacher's College (Class of 1938). Mrs. Case taught in various public Michigan schools including Durand, Midland and Bad Axe.

**Jon and Elaine Caswell Family Scholarship**

Established in 2018 by Jon '64 and Elaine Caswell, in honor of David Nicholson '64. Income from this renewable award will support a part-time or full-time student at CMU who is a single parent or to a student from a single parent household. Recipient must demonstrate financial need with a minimum GPA of 3.0. Preference will be given to applicants who distinguished themselves in the advancement of underrepresented groups in American society.

**CBA Alumni Scholarship Endowment**

Established in 2005, income from the endowment will provide a scholarship to students with an ACT score of 25 or higher who have expressed an interest in business. The award is renewable up to three additional years if the recipient maintains full-time status, a minimum 3.25 GPA and continues progress toward a degree in business.

**CBA Leadership Development Program**

Established in 2021 by David '91 and Penny Queller '91, both CMU graduates from the College of Business Administration. Funds will establish the CBA Leadership Development Program to help bridge the achievement gap for talented students who may not have the same confidence-boosting opportunities as their peers due to social, economic, educational, or other disparities. The program will be provided to students majoring in business who are meeting academic requirements and, through this program, will develop a growth mindset that will further their personal and professional goals and help prepare them for the competitive internship and job market. Candidates for this program will be students who are not already in one of CMU's formal leadership development programs where they are receiving additional scholarship funding, formal mentoring or experiential learning opportunities. Funds may be used for but not limited to the following purposes: Program Director stipend; Academic and training resources; Workshops; Networking events; Fees for professional conferences; Travel for students and the Director to visit companies and network with industry leaders; Scholarships. To receive the CBA Leadership Development Program, students must have a signed major in the CBA, be admitted to the CBA Leadership Development Program, have a minimum cumulative GPA of at least 3.0, and demonstrate unmet financial need verified by the Office of Scholarship and Financial Aid.

**Central Michigan University General Scholarship Endowment**

Established in 2020 from the estate of Robert and Mary Elizabeth Byram '45. Mrs. Byram earned her Central Michigan University Bachelor of Science in Home Economics in 1945. During her time here she was the Student Body President for two years. Income from this endowment will support a general scholarship fund, for an endowment to provide scholarships for its students.

**Centralis Alumni Scholarship**

Established by Centralis alumni, faculty and friends to support a scholarship for an Honors student in good standing with the Honors Program. Recipient must have completed at least 56 credit hours and have a cumulative minimum GPA of 3.25. The award is based on academics, community service, and extracurricular accomplishments while an Honors student at CMU. Applicants must submit an application/essay describing the role the Honors Program has played in his/her academic success.

**Veha Chamichian Endowment for Orchestral Studies**

Established in 2011 by alumni and friends in honor of Veha Chamichian for all she has done for the University community. Income from this endowment will benefit orchestral studies in the School of Music. The award will enable the college to acquire orchestra equipment and instruments, provide for student travel opportunities, grant student scholarships, commission works, fund guest artists, purchase or rent music, and provide for other opportunities that directly benefit the CMU Orchestra Program. If funds are used for student scholarship, the recipient will be a full-time student enrolled in the School of Music as a music major who has a minimum GPA of 3.0.

**Beverly A. Gould Chapin Endowed Music Award**

Established in 2007 by Dr. Maurice H. Chapin (Class of 1951) in memory of Beverly A. Gould Chapin (1951). Income from the endowment will support a renewable scholarship for a student enrolled in the School of Music. Recipient will be a student who has achieved music candidacy and has successfully completed at least 30 hours of coursework at CMU, with a minimum GPA of 3.0.

**Dr. Maurice H. Chapin Pre-Medicine Endowed Award**

Established in 2007 by Dr. Maurice H. Chapin (Class of 1951). Income from the endowment will support a renewable scholarship for a student enrolled in the Department of Biology pre-medicine program. Recipients of the scholarship will have a minimum GPA of 3.0. The award is to be used for tuition and books.

**Debasish and Rebecca Chakraborty Endowed Award**

Established in 2017 by Drs. Debasish and Rebecca Chakraborty. Dr. Debasish Chakraborty teaches in the Department of Economics and the Master of Business Administration program at Central Michigan University. The award is for a junior or senior enrolled full-time in the College of Business Administration majoring in Economics. Recipient must have a cumulative minimum GPA of 3.00.

**Karen L. Mohr Chavez Endowed Award**

Established by friends, colleagues, and family of the late Dr. Karen L. Mohr Chavez, a professor of Anthropology/Archaeology in the Department of Sociology, Anthropology, and Social Work at CMU. Income from the renewable endowment will support an award for an Anthropology major (to be used during sophomore, junior, or senior year), with a minimum 3.5 GPA who intends to pursue a graduate degree in Anthropology/Archaeology (additional requirement include an essay on professional goals and two letters of recommendation). The award amount is up to \$500 per recipient, and will support field a laboratory research experience and/or attending regional and national academic conferences in Archaeology.

**Chemical Financial Corporation Endowed Scholarship**

Established in 2009 by Chemical Bank. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration with a minimum GPA of 3.0. Preference will be given to students from Clare or Midland County, if no students from these counties meet the criteria, then any student from Michigan meeting the criteria may apply.

**Eugene C. Chenoweth Debate Award**

Established in 1980 through the estate of Eugene C. Chenoweth for undergraduates who exhibit excellence in intercollegiate debate competition. The award is administered by the director of debate and chairperson of the School of Communication, Journalism, and Media.

**Gabriel Chien Memorial Scholarship**

Established in 2003 by Florence Chien in memory of her husband Gabriel Chien, who was a history professor at CMU. Proceeds from this endowment will be used to support a student scholarship. The recipient will be a United States citizen enrolled in the College of Liberal Arts and Social Sciences who has demonstrated a global and historical perspective.

**The Christman Company Endowed Scholarship**

Established in 2005 by The Christman Company. Income from the endowment will support a renewable scholarship for a student pursuing a major in electrical or mechanical engineering within the College of Science and Engineering. Preference will be given to incoming freshmen who have had three years of high school math. The student must have a minimum GPA of 3.0 and be able to demonstrate financial need.

**Citizens Insurance Company of America Scholarship**

Established in 1989 by Citizens Insurance Company of America, Howell, MI, for a College of Business Administration student who meets eligibility requirements specified by Citizens Insurance Company of America.

**Clarke Endowed Student Journalist Scholarship**

Established in 2015 by Kim Clarke '82 and Barry LaRue. Income from the endowment will support a renewable award for a journalism major who has worked at least two semesters at CM LIFE or other community college newspaper (transfer student) with a minimum 3.0 GPA and who demonstrates financial need.

**Robert and Susan Clarke Scholarship**

Established in 2005 by Robert (Class of 1971) and Susan Clarke (1971). Income from the endowment will support a scholarship for a graduate from Harbor Springs High School. Preference will be given to incoming freshman and those pursuing a degree in business or education.

**John and Mary Ann (Kaatz) Click Endowed Award**

Established in 2011 by Patricia Janes '86, '92 and Theresa Cusworth '79, '88 in honor of their parents, John and Mary Ann (Kaatz) Click. Income from the endowment will support an award for a full-time student enrolled in the College of Education and Human Services, in a service oriented studies program with a minimum GPA of 2.5. The recipient must work or volunteer a minimum of ten hours per week and explain the reason(s) for choosing a service career.

**CMU Police Scholarship Fund**

Established by the CMU Police Department to provide financial assistance to students.



**CMU Women's Connection Scholarship**

Established in 2007 by CMU Women's Connection donors. This association provides a platform for alumnae and friends to be actively engaged in the advancement of the university and to promote enhanced learning opportunities for CMU students. Income from this renewable award will support a part-time or full-time student at CMU who is a single parent\* or to a student from a single parent\* household. Recipient must demonstrate financial need with a minimum GPA of 2.75. (\*"single parent" defined as a sole parental figure who shoulders the day-to-day responsibilities of raising a child without any assistance, financial or otherwise, from the other parent or partner, regardless of current or previous marital status to one another).

**George and Luella Cobb Endowed Scholarship**

Established in 2015 by Vicky Cobb '84, '91. Income from the endowment will support an incoming freshman with a minimum GPA of 3.0 from the Central Michigan region (Mason, Lake, Osceola, Clare, Gladwin, Arenac, Oceana, Newaygo, Mecosta, Isabella, Bay, Montcalm, Gratiot, Shiawassee or Saginaw counties) demonstrating financial need. The recipient will be a full-time student studying one of the disciplines offered by the College of Science and Engineering, preference will be given to students majoring in Chemistry or Biochemistry and those committed to alleviating the underrepresentation of women in STEM disciplines. Recipient must show the potential for leadership at the collegiate level. Recipient agrees to take the First Year Experience class (if available).

**Cochran/Burke Scholarship for STEM Education**

Established in 2005 by Dr. Jennifer Cochran and Dr. Peggy Burke, CMU faculty. Income from the endowment will support a renewable award for a junior or senior with a minimum GPA of 3.00. The recipient must be majoring in a STEM field and aiming to teach middle/high school. The recipient must be an advocate for the advancement of women in STEM fields.

**Alice J. Wesley Colby and William F. Colby Scholarship**

Established in 1998 by Judith Mynsberge in memory of her aunt, Alice Wesley Colby (Class of 1935) and William Colby. This scholarship is awarded annually to students, preferably from Bay or Alpena Counties, who have achieved a 3.0 GPA in high school and are in need of financial assistance to pursue a career in teaching.

**Roger L. Coles RPL Leadership Award**

Established in 2010 by Roger L. Coles '73, '77, interim dean of the College of Graduate Studies, formerly the chairperson of Recreation Parks and Leisure Services Administration. Income from the endowment will support a renewable award for a full-time student enrolled in the College of Education and Human Services, Department of Recreation, Parks and Leisure Services Administration with a minimum GPA of 2.75 and who is a member of an RPL Registered Student Organization. Candidate must demonstrate level of involvement through study and/or state/ national organization or community service.

**Gary L. and Cathleen M. Collins Endowed Scholarship**

Established in 2010 by Gary L. (Class of 1969, 1971) and Cathleen M. Collins (1998) to support students seeking an experience in international business. The award will be for a junior or senior who is a Michigan high school graduate, majoring in business, who will be seeking opportunities for experiences through internships or other business educational opportunities. The award may be used to assist with travel related expenses or a scholarship to assist a student studying business through a sponsored College of Business Administration program. Recipient must have a record of academic excellence as demonstrated by a GPA of 3.25 or higher.

**Jeanne F. Collins Scholarship**

Established in 1986 by Robert John Collins in memory of his wife, Jeanne F. Collins, dedicated administrative assistant to four CMU presidents spanning 23 years.

**Lucy and Edward Collins Endowed Award**

Established in 2021 by Michael E. Collins '94 in memory of his parents, Lucy and Edward Collins. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration demonstrating financial need. The recipient will have a record of academic excellence, maintaining a minimum cumulative GPA of 3.75 or higher.

**R. Cedric Colness Vocal Scholarship**

This scholarship was established in 1975 by I. Judith Colness in memory of her husband, R. Cedric Colness. Professor Colness was a member of the Music Department faculty for ten years as a teacher of voice, opera theatre, musical theatre, and voice pedagogy. Earnings from this scholarship will provide an annual scholarship for one vocal music major of sophomore, junior, or senior status who exhibits excellence and proficiency in this field. The recipient will be selected at a vocal competition on campus during the spring semester prior to the upcoming academic year. Specifications for the competition are as follows:

1. Donor (or designee) must be notified of the date, time, and place for the vocal competition.
2. The vocal scholarship application must compete and sing three selections from memory:
  - a. a Lied (German) Art Song
  - b. a Chanson (French) Art Song
  - c. an Operatic aria
3. The competition must include at least one judge from outside the campus/ Mt. Pleasant area.
4. The donor (or designee) will be notified of the winning recipient

**Computer Science Endowment**

Established 2005. The spendable income from this endowment may be used for scholarships for undergraduate or graduate students, student awards, professional events in the department, and other necessary purchases for the benefit of the Computer Science Department. If used for a scholarship for undergraduates, the students must be a sophomore or junior, an authorized CPS or ITC major (Computer Science or Information Technology), and have a minimum 3.3 GPA. Graduate Students must be an authorized major in CPS MS. The award is renewable.

**Blanche Connell Scholarship**

Established in 1988 by Southeastern Michigan Hospital Purchasing Management, Inc., in honor of Blanche Connell, for a CMU Global Campus student pursuing a Master of Science in Administration degree with a concentration in Health Services Administration. Applicants must have successfully completed a minimum of nine credit hours and earned a minimum GPA of 3.0. Preference is given to residents of the seven (7) county area of southeastern Michigan including Lapeer, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.

**Con-way Freight Inc. Endowed Logistics Honors Award**

Established in 2008 by John Labrie (Class of 1989) and Con-way Freight Inc. The renewable award will support an honors student enrolled in the College of Business Administration's logistics management program with a minimum GPA of 3.25

**Fred and Joyce Cook Endowed Scholarship.**

Established in 2005 by Fred (Class of 1969) and Joyce (1992) Cook. Income from the endowment will support a renewable scholarship for an incoming freshman. Preference will be given to a student working toward the advancement of minorities and who can demonstrate financial need.

**Dr. Robert and Karen Cook Endowed Scholarship**

Established in 2009 by CMU alumni in honor of Dr. Robert Cook, professor of Marketing and Hospitality Services Administration and Mrs. Karen Cook. Income from the endowment will support an award for a student enrolled in the College of Business Administration majoring in Logistics Management, with a minimum GPA of 3.25.

**Wells Cook Endowed Award**

Established in 2007 by friends and family of Dr. Wells F. Cook (Class of 1950), former professor at CMU. Income from the endowment will support a renewable award for students enrolled in business information systems with a minimum GPA of 3.0.

**Cynthia Diane Cordell Scholarship**

Established by the family of Cynthia Diane Cordell, a CMU student who was preparing to become a teacher at the time of her death in December 1968, for worthy junior, senior or graduate level students in good standing pursuing a teaching curriculum.

**Florence Olive Courville Scholarship**

Established through the estate of Florence Courville, a friend of education, for worthy students from Benzie County.

**Crawford & Winiarski/Rodney L. Crawford Scholarship in Forensic Accounting**

Established in 2000 by Rodney L. Crawford (Class of 1977). Income from this scholarship will support a junior or senior enrolled in the College of Business Administration with a minimum GPA of 3.7 on a 4.0 scale. The student will also be pursuing the 150-hour requirement for the CPA examination, with intent to pursue a career in public accounting and interest and aptitude in the area of forensic accounting or litigation consulting services.

**Hubert Dixon Crider Scholarship**

Established in 1980 by Muskegon Development Company in honor of Hubert Dixon Crider, Muskegon, MI, for a junior or senior in good academic standing with a major or minor in geology. Mr. Crider came to Michigan in 1925 and was responsible for selecting the well site for the drilling of the first major oil discovery in the state of Michigan. Mr. Crider continued to serve the industry for 55 years in his field of geology. Recipient selection is made by a Department of Earth and Atmospheric Sciences committee.

**Dorothy L. Galloway Crooks Elementary Education Scholarship**

Established in 2005 by Dorothy L. Galloway Crooks (Class of 1954). Income from the endowment will support a renewable scholarship for a junior or senior enrolled in the College of Education and Human Services, admitted to the elementary teacher education program. The recipient must have a minimum GPA of 3.0 and demonstrate financial need.

**David H. Current Endowed Scholarship**

Established in 2011 by Diane E. Current and faculty members in memory of David H. Current. Income from the endowment will support a renewable award for a full-time junior or senior student enrolled in the College of Science and Engineering, Department of Physics with a minimum 3.0 GPA. Student must demonstrate a passion for Physics, growth in problem solving skills and interest in experimental Physics.

**Bob Currie Scholarship**

The Bob Currie Memorial Loan Fund, established in January, 1974, was converted to an endowed fund in 1988 to provide an academic achievement scholarship to a CMU student majoring in physical education with preference given to former swimmers from Dearborn, MI.

**Herbert L. and Lillian M. Curry Scholarship**

Established in 1995 by Karen Heydenburg and Dennis Curry in memory of their parents with preference for junior or senior IPC majors with a 3.0 or higher GPA, with an emphasis in oratory/debate or speech education and participation in debate, oratory or other forensic activities. Applications may be made through the Director of Forensics.

**Waldo J. and Kathryn Curtiss Endowment**

Established in 2005 by Waldo and Kathryn Curtiss. Income from the endowment will support either a scholarship or purchase equipment for learning or physically disabled students.

**Nicholas Cuthbert Biology Scholarship**

Established in 1993 in memory of CMU Professor Emeritus Nicholas Cuthbert. This merit-based scholarship will be awarded to a signed biology major.

**Dalton-Meisel Grant Scholarship**

Established in the mutual will of Frank W. Dalton and Lillian M. Dalton. The Daltons were both CMU graduates who were active in alumni affairs and in Michigan schools.

**Levi, Mildred and Rusch Dees Scholarship**

Established in 1996 for one senior student majoring in voice who has earned a 3.0 or higher GPA. Application may be made through the School of Music each spring.

**Deloitte Foundation Scholarship**

Established in 2016 by the Deloitte Foundation to support a student enrolled in the College of Business Administration. Recipient will be pursuing a major within the School of Accounting or Department of Business Information Systems with a cumulative minimum GPA of 3.3.

**G. Roland and Olga Jones Denison College of Business Administration Scholarship**

Established in 1983 by CMU graduates Olga Jones Denison (1940) and "Rollie" Denison (1941) in appreciation of the influence of CMU on their lives as alumni and as residents of the city of Mt. Pleasant. Awards are for one or more junior or senior students of the College of Business Administration. Selection of recipients is made by a committee of the College of Business Administration and based on scholarship, citizenship and need.

**Charlotte Denman/Elanore Thompson Endowed Scholarship**

Established in 2005 by Elanore Thompson in honor of Charlotte Denman. Income from the endowment will be used to support a renewable scholarship for a student who is a junior with an expressed interest in teacher education, with either a major in physical education and an academic minor, or an academic major with a physical education or coaching minor. Recipients must have a GPA equal to the NCAA standard, currently 3.3. Preference will be given to student athletes or those working with an athletic team.

**Amie Jo and Kellie Sue Dennis Scholarship**

This one-year scholarship is awarded as selected by a committee from Beal City High School to a graduating senior enrolling at CMU. The endowment was provided by family and friends of Amie Jo and Kellie Sue Dennis in 1986 shortly after their untimely deaths at ages 17 and 15. Amie Jo and Kellie Sue were active and energetic Beal City High School students.

**The Joseph and Sandra DeWaele Teaching Scholarship**

Established in 2021 by Sandra M. DeWaele '70 in honor of her late husband Joseph DeWaele '74, both having received their degree from Central Michigan University. The education they received made a difference in their lives and they want to help others realize the joy of educating future students. The recipient of the award will be a full-time junior or senior enrolled in the College of Education and Human Services pursuing a degree that leads to teacher certification in: Early Childhood, Special Education, Elementary Education, or Secondary Education while also maintaining a cumulative minimum GPA of 3.0.

**Gregory and JoAnn DeWitt Endowed Award Fund**

Established in 2008 by Gregory (Class of 1983) and JoAnn DeWitt (1983). Income from the endowment will support an award for a full-time sophomore or higher undergraduate student majoring in business from Kent, Ottawa or Muskegon counties with a minimum GPA of 3.0. Preference will be given to a student demonstrating financial need.

**Joyce and Gary DeWitt Endowed Scholarship**

Established by the DeWitt family in 2007 for students pursuing a graduate or undergraduate degree through Central Michigan University's Global Campus. Applicants must have successfully completed a minimum of twelve (12) credit hours and have earned a minimum GPA of 3.0. Recipient must be enrolled in a minimum of two courses during the year the scholarship is awarded. Preference will be given to students who are residents of the greater Grand Rapids/Holland, Michigan area.

**Diehl Award in Business Information Systems**

Established in 2007 by a trust from Ben and Edna Diehl '40. Income from the endowment will support a renewable award for a student enrolled in Business Information Systems who has a cumulative minimum GPA of 3.0.

**Norman Dietz Endowed Music Award**

Established in 2009 by friends and family in honor of Norman C. Dietz (Class of 1941), music professor emeritus. Professor Dietz was an inspiration to many as a musician, teacher, leader, and mentor who instilled in students a standard of excellence that not only impacted their musical skills but also fostered the satisfaction of achieving success beyond personal expectations. Income from the endowment will support a renewable award for a junior or senior music major. The recipient must be a member of one or more of the School of Music presentation instrumental ensembles, possess strong leadership skills and have a minimum GPA of 3.0.

**The Norman C. Dietz Scholarship**

The recipient of the Norman C. Dietz Scholarship is to be a non-music major member of the CMU Marching Chippewas who exhibits outstanding leadership and musicianship and whose integrity is beyond reproach.

**Wendell and Marcia Dilling Chemistry Endowed Scholarship**

Established in 2008 by Wendell and Marcia Dilling. Income from the endowment will support a renewable award for a student enrolled in the College of Science and Engineering and the Department of Chemistry and Biochemistry with a GPA of at least 3.0.

**Russell and Linda Dippel Family Award**

Established in 2008 by Kristen Holt (Class of 1994). Income from the endowment will support a renewable award for a study abroad student enrolled in the College of Business Administration, majoring in accounting with a minimum GPA of 3.0 and demonstrating financial need. Preference will be given to students from Eisenhower High School in Shelby Township, MI.

**Claudia B. Douglass Science Education Award**

Established in 2004 by Dr. Claudia Douglass, professor of biology at Central Michigan University. Income will be used to support a renewable award for a sophomore, junior or senior pursuing a major in elementary or secondary Integrated Science (preferred) or secondary Biology. Recipient must have an overall GPA of 3.5 or higher and a GPA of 3.25 in all science classes (excluding mathematics).

**Dow Corning CMU Endowed Scholarship**

Established in 2006, the scholarship was funded by a group of Dow Corning employees, all dedicated CMU alumni, in memory of Larry Reed '69. Income from the endowment will support a scholarship for an undergraduate student enrolled in the College of Business Administration; preference may be given to juniors. The recipient will be performing at a high level in their academic coursework. Selection will be based upon GPA, performance in specific business courses, faculty recommendations, demonstrated leadership in college related activities and the potential for success following completion of the degree. A list of finalists for the scholarship is to be sent to a selection committee, who may also recommend recipients. The selection committee shall make the final determination of the recipients. Preference may be given to applicants who are available to intern as students with Dow Corning and willing to consider full time employment with Dow Corning upon graduation.

**Lee and Lori Dow Endowed Scholarship**

Established in 2009 by Lee (Class of 1976) and Lori Dow. Income from this endowment will support a renewable award for a junior enrolled in the College of Business Administration demonstrating financial need with a minimum GPA of 3.5.

**Edana DuGuay Scholarship for French Study Abroad**

Established in 1986 by the Department of Foreign Languages, Literatures and Cultures in honor of Dr. Edana DuGuay, former professor of French, for a student majoring in French for the purpose of studying abroad. The award is given on a competitive basis to a junior or senior of high academic standing.

**Dennis L. Durkee Endowed Award in Journalism**

Established in 2010 by Dennis L. Durkee (Class of 1978). Income from this endowment will support an award for a full-time sophomore or higher majoring in journalism with a minimum GPA of 3.0.

**J. Dean and Betty L. Eckersley Business Administration Scholarship**

Established in 1996 as a renewable scholarship for a freshman, sophomore, junior or senior student intending to pursue or major in business administration within the College of Business Administration who has earned a minimum GPA of 3.0 for an incoming freshman or sophomore, a 3.25 for a junior and 3.5 for a senior with financial need as determined by CMU. Preference will be given to students from Isabella County, other counties of Michigan and transfer students from Mid-Michigan Community College who were recipients of the J. Dean and Betty L. Eckersley Scholarship. Application may be made through the College of Business Administration.

**J. Dean and Betty L. Eckersley Music Scholarship**

Established in 1996 as a renewable scholarship for a freshman, sophomore, junior or senior student intending to pursue or major in music within the School of Music who has earned a minimum GPA of 3.0 for an incoming freshman or sophomore, a 3.25 for a junior and 3.5 for a senior with financial need as determined by CMU. Preference will be given to students from Isabella County, other counties of Michigan and transfer students from Mid-Michigan Community College who were recipients of the J. Dean and Betty L. Eckersley Scholarship. Application may be made through the School of Music.

**Daniel and Debra Edson Endowed Scholarship**

Established in 2015 by Daniel '73 and Debra Edson '72, '80. Income from the endowment will support a renewable award for a student enrolled in the College of Education and Human Services Department of Teacher and Special Education, majoring in Special Education or the Department of Human Development and Family Studies majoring in Early Childhood Development. Recipient will be a junior or senior with a cumulative minimum GPA of 3.0 and must be a resident of Michigan.

**Educational Leadership Endowed Scholarship**

Established in 2016 by faculty, staff, emeriti, alumni and friends of the Department of Educational Leadership to support student learning experiences related to coursework such as professional development, international travel, or course tuition. Recipients will be currently enrolled in a Department of Educational Leadership degree program; undergraduate minor, graduate program or doctoral program, and must be in good standing with the department and the university. Preference will be given to applicants that connect their experience to advancing the mission of the Department of Educational Leadership.

**Brent Edwards Memorial Award**

Established in 2005 by friends and family in memory of Brent Edwards. Brent was in his junior year at CMU when he passed away. The recipient of this renewable award will be a student from Flushing High School. Preference will be given to a student planning to or majoring in a recreation, parks, and leisure services administration program and has a minimum GPA of 3.0.

**EHS International Programs Award**

Established in 2008 for student(s) enrolled in the teacher education program in the College of Education and Human Services with a minimum 3.0 GPA. The award will be for an international student and renewable for up to three years of full-time continuous enrollment; and/or a domestic student, non-renewable, participating in the eight-week Student Teaching Abroad program.

**Dick Enberg Student Athlete of the Year Award**

Established in 2006 by Dick Enberg (Class of 1957). He also received an honorary Doctor of Laws degree from CMU in 1980. Dick broadcasted the NFL and College Basketball for CBS, and could be seen commentating for tennis and various other sports on many networks. Income from the endowment will support a scholarship for a junior entering his/her senior year or a senior with one year of athletic eligibility remaining. The recipient must have earned a varsity letter during the current academic year and have a minimum 3.2 GPA.

**Dick Enberg Endowed Scholarship for Health Professions**

Established in 2006 by Dick Enberg (Class of 1957). He also received an honorary Doctor of Laws degree from CMU in 1980. Dick broadcasted the NFL and College Basketball for CBS, and could be seen commentating for tennis and various other sports on many networks. The recipient of the renewable scholarship will be an incoming freshman from a Michigan Class C or D high school with a minimum GPA of 2.7 intending to study within The Herbert H. and Grace A. Dow College of Health Professions.

**Leo G. Erickson Excellence in Marketing Scholarship**

Established in 1998 in memory of Leo Erickson, emeritus professor of marketing, who distinguished himself through outstanding contributions to marketing education, research, and administration. Endowment earnings will provide an annual merit-based scholarship for marketing students.

**Elizabeth Etnire Scholarship for Spanish Study Abroad**

Established in 1988 in honor of Elizabeth Etnire, former CMU Spanish professor, advisor and department chairperson. Recipients will be Study Abroad Spanish majors and minors with preference going to those students who express interest in teaching.

**Charlotte B. Evans Scholarship for German Study Abroad**

Established in 1988 in honor of Charlotte B. Evans, former CMU German professor and department chairperson between 1977 and 1988, for CMU German majors to study abroad.

**Howard Evans Study Abroad Scholarship**

Established in 2008 by Dr. Howard V. Evans and Dr. Charlotte B. Evans in honor of the dedication and support that Dr. Howard V. Evans has bestowed on the European history department. Income from this endowment will support an award for a junior or senior history student studying abroad with a minimum GPA of 3.0.

**Faculty Association Scholarship**

Established in 2014 by the CMU Faculty Association to honor CMU students. Income from this endowment is intended to support a renewable award for a full-time student(s) demonstrating financial need. Recipient will be an undergraduate student with a cumulative minimum GPA of 2.5 or higher. Student must also provide a personal statement that explains how the scholarship will impact him/her and submit a letter of recommendation from a faculty member.

**Fran and Jim Falender Endowed Scholarship in Chemistry**

Established in 2007 by Fran Falender (Class of 1969, 1978) and Dr. James Falender, chemistry instructor at CMU. Income from the endowment will support a renewable award for a student majoring in chemistry or a cross-disciplinary program involving chemistry.

**Michael J. and Susan P. Farrell Endowed Scholarship in Science Education**

Established in 2014 by Michael J. '77 and Susan P. Farrell '77. Income from the endowment will support a renewable award for a student enrolled in the College of Science and Engineering pursuing a career in science education with a minimum GPA of 2.75.

**Drusilla Farwell Foundation Endowed Award**

Established in 2007 by the Drusilla Farwell Foundation. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration with a minimum GPA of 3.0.

**Richard D. Featheringham Endowed Organ Scholarship**

Established in 2005 by Dr. Richard (Class of 1981, 1984) and Audrey Featheringham. Income from the endowment will support a renewable scholarship for an undergraduate or graduate student with a minimum GPA of 3.0. Preference is for organ major or minors, then for keyboard major or minors. The student must successfully audition with the School of Music.

**Robert G. Fell Endowed Scholarship**

Established in 1986 in memory of Robert G. Fell, former CMU biology professor, for a biology student.

**Lon Ferguson Memorial and Friends of Art and Design Travel Endowment**

Established in 2011 by friends and family in memory of Lon Ferguson, former art and design instructor at CMU. Income from this endowment will be used to support a travel award. The recipient will be a student enrolled in the College of the Arts and Media and the Department of Art and Design. The student must be a full-time art major with a minimum GPA of 3.0. The award is intended to support a student engaged in a study away experience that will enrich his/her artist repertoire through applied research/creative endeavor, which could include a study abroad experience, research trip, or applicable artistic internship/apprenticeship experience.

**Fausto and Gladys Fernandez Endowed Scholarship**

Established in 2010 by Eduardo B. Fernandez (Class of 1984) in honor of his parents, Fausto and Gladys Fernandez. Income from the endowment will support a renewable award for an incoming sophomore or higher with a signed major in Broadcast and Cinematic Arts. Student must have an overall GPA of at least 2.5 and a minimum 3.0 in BCA classes. Student will be active in BCA co-curriculars and preference will be given to a student working toward the advancement of minorities in broadcasting.

**Richard & Virginia Feusse Scholarship**

Established in 2012 by Tom '80 & Wendy Feusse '79, in honor of Tom's parents, Richard '50 & Virginia Feusse '48, '52, both retired teachers. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration. Recipient will have an interest in the study of accounting or finance with a minimum GPA of 3.5.

**Malcolm H. Filson Endowed Scholarship**

Established in 2000 to honor Malcolm H. Filson, former chemistry department chairman. Proceeds from the endowment will be used to establish a scholarship for a second semester sophomore, majoring in Chemistry, with a 3.0 minimum GPA.

**Ronald W. and Bernice F. Finch Scholarship**

Converted in 1995 from a loan fund established in 1962 to commemorate Ronald W. Finch's 25 years of dedication, service, loyalty and positive effect on CMU as an alumnus. He received his life certificate in 1924, B.S. in 1932, was head football and track coach, initiator of the relays, head of the physical education department and the first dean of the School of Health, Physical Education and Recreation when Central became a university in 1959. The fieldhouse was named in his honor at the request of alumni, homecoming weekend in 1962. Ronald W. and Bernice F. Finch were active CMU supporters for many years. Annual spendable investment income will be awarded to a senior in education with a major or minor in physical education. Application may be made through the Department of Physical Education and Sports.

**First Nighters Scholarship**

Established in 1991 by members of First Nighters for students who have an overall GPA of 2.5 or higher and a 3.0 or higher in each Theater and Interpretation class. The recipient must have a signed major or minor in Theatre and Interpretation (TAI). Music Theatre students who meet the qualifications are also eligible to apply. The recipient must have completed fifteen (15) hours of TAI classes and be returning to CMU in the fall of the subsequent year following his or her selection.

**Bud Fisher and Fisher Companies Study Abroad Scholarship**

Established in 2005 by Bud Fisher and Fisher Companies. Income from the endowment will support a renewable scholarship for a student(s) who wishes to study abroad. The recipient(s) will be a sophomore or higher or a graduate student who has completed at least one semester of study, with a minimum GPA for an undergraduate of 2.7 and 3.2 for a graduate. Preference will be given to students studying in non-Western and non-English speaking countries. The recipient must be a U.S. citizen or permanent resident, demonstrate financial need, be enrolled full time at the time of the award and during the term of study abroad (one or two semester), and fulfill the in-kind service requirement upon return.



**David R. Fisher Memorial Award**

Established in 2007 by Brett W. Fisher in memory of his father, David R. Fisher, a former university employee. Income from the endowment will support a renewable scholarship for a student enrolled in the Department of Art & Design with an interest in the study of photography and a minimum 3.0 GPA.

**Frances G. Fitch Art Scholarship**

The Department of Art Scholarship established in 1988 was renamed in 1993 to commemorate former art faculty member Frances G. Fitch. Junior or senior recipients with a 3.5 or better GPA in art classes are chosen by members of the Department of Art & Design.

**Kelly Lynn Fitzpatrick and Bruce William Wood Scholarship**

Established in 1992 by family and friends of two alumni for rotating scholarships for CMU students in broadcast and cinematic arts and journalism.

**Mae B. Fleming Award**

Established in 1999 by Nancy J. Blay in memory of her mother Nancy Mae Bowers Fleming, former teacher and CMU housemother, for an education major who is active in extra curricular or community activities.

**Kendall W. Folkert Award**

Established in 1987 in memory of Kendall W. Folkert, former chairperson and professor in the Department of Religion, for a graduating senior who has been admitted to a graduate program in South or East Asian studies or undergraduates pursuing work in South or East Asian studies through a study-abroad program.

**Phillip V. and Sylvia M. Frederickson Foundation Endowed Scholarship**

Established in 2014 by the Phillip V. and Sylvia M. Frederickson Foundation. Income from this endowment will support a renewable award for a full-time incoming freshman demonstrating financial need who is also a resident of the State of Michigan. Recipient must have a cumulative minimum GPA of 2.7 or higher.

**Wasaburo Fujimiya Study Abroad Scholarship**

Established in 2014 by Wasaburo Fujimiya '66 for undergraduate and graduate students who wish to study abroad. The Donor wishes to support CMU students pursuing their education overseas and international students studying at CMU. Income from the endowment will support a renewable scholarship for student(s) in good academic standing with a 3.0 cumulative minimum GPA who chose to study in one of Central Michigan University's Japanese or East Asian exchange partner program universities, and/or students from one of these exchange program universities studying at CMU. Recipient must be approved to study abroad through CMU and be enrolled full-time at the time of the award and during the term of study abroad.

**E. Evelyn Fuller Memorial Endowed Award**

Established in 2001 by the E. Evelyn Fuller (Class of 1940) estate. Proceeds from the endowment will be used to establish an award based on financial need, the recipient must be a Michigan resident studying education with a junior class status. The award is renewable one semester only.

**Fuller Endowed Scholarship**

Established in 2014 by Gary Fuller, professor of Philosophy and Religion at CMU, to support a student with a major or minor in Philosophy. Income from the endowment will support a renewable award for a junior or higher (counts as at least a junior in August) with a cumulative minimum GPA of 3.0, both overall and in Philosophy (if this applies) for the previous year. Recipient will also have demonstrated strong philosophical ability and motivation. The applicant is required to submit an essay not to exceed 500 words reflecting his/her interest in the study of philosophy along with a one page application available from the Department of Philosophy, Anthropology, and Religion's website.

**Carl V. and Margaret Hahn Furney Scholarship**

Established in 2007 to provide educational scholarships to single parents who are in need of financial assistance. Students who are seeking a degree in teacher education or who are currently majoring in teacher education shall be given first preference. The recipient is to attain the minimum GPA to qualify or maintain their teacher education major status. The money may be used for tuition, books, or to assist with child-care while the recipient single parent attends classes. The maximum payment should not exceed \$15,000 per year and is renewable.

**Future Alumni Association Scholarship**

Established in 1981 through efforts of the CMU Student Foundation to provide a nonrenewable scholarship for undergraduate students. The recipient(s) will be the child or grandchild of a Central Michigan University alumnae or alumna and have a minimum GPA of 3.0. Preference will be given to students that are active in a student group that is similar in function to the Future Alumni Association if one exists. The number, amount, and recipients of the scholarship will be determined by the Alumni Relations Office/ Executive Director of Alumni Relations & Development Strategies in consultation with the Office of Scholarships and Financial Aid.

**Future Business Leader Scholarship, an Allen & Nancy Vander Laan Endowed Scholarship**

Established in 2015 by Allen '72 and Nancy Vander Laan '73. A renewable award for a junior or senior enrolled full-time in the College of Business Administration seeking a Bachelor of Science in Business Administration degree with a field of study in General Business Administration, General Management and/or Economics. Candidate must demonstrate an interest in owning and running his/her own business in the future. He/she must have a cumulative minimum GPA of 3.00 and have had a small business experience. Candidate should also demonstrate a history of past philanthropy, volunteerism or giving back to his/her community or faith-based organization. Preference given to West Michigan residents.

**Future Educator Scholarship, an Allen & Nancy Vander Laan Endowed Scholarship**

Established in 2020 by Allen '72 and Nancy Vander Laan '73. Income from the endowment will be used to support a renewable award for a full-time junior or senior enrolled in the College of Education and Human Services seeking a degree in Teacher Education, Early Childhood, Special Education, Elementary Education or Secondary Education. Candidate must have a cumulative minimum GPA of 3.00 and demonstrate financial need. Preference will be given to a recipient with demonstrated history of past philanthropy, volunteerism or giving back to his/her community or faith-based organization.

**The John and Gwendolyn Gage Endowed Scholarship in Teacher Education**

Established in 2018 by Dr. Gwendolyn Rowe Gage '74 and Mr. John Gage. Income from the endowment will support a renewable award for a student who is a Michigan resident demonstrating financial need and participates in at least one registered student organization on CMU's campus. Recipient will be enrolled in the Department of Teacher Education and Professional Development majoring in Elementary Education or Early Childhood Education with a cumulative minimum GPA of 3.0.

**Edmund and Marjorie Galant Endowed Award**

Established in 2006 by Dr. Richard Galant in honor of Edmund (Class of 1940) and Marjorie Galant (1941). Income from the endowment will be used to support a renewable award for a junior or senior admitted to the secondary education program in the Department of Teacher Education and Professional Development with a minimum GPA of 3.5. First preference should be given to students who are residents of Kent or Washtenaw counties, but may be awarded to any qualified resident in the State of Michigan.

**General Motors Scholarship in honor of Tony Cervone**

Established in 2017 by General Motors Corporation in honor of Tony Cervone '84, Senior Vice President of Global Communications. Income from the endowment will support a renewable award for a student majoring in journalism, broadcast and cinematic arts, or integrative public relations. Recipient will have a cumulative minimum 3.0 GPA and demonstrate financial need.

**Myron and Hazel Georgia Scholarship**

Established in 1989 by Myron and Hazel Georgia. Income from this endowment will support a scholarship for a student enrolled in the College of Science and Engineering and majoring in Mechanical Engineering Technology, Industrial Engineering Technology, Product Design Engineering Technology, or Mechanical Engineering with a GPA of at least 3.0. Preference will be given to non-traditional students.

**William R. Gemma Memorial Award**

Established in 1999 in memory of CMU associate professor William R. Gemma, Ph.D., for Health Services Administration and International Administration majors.

**General Dynamics Land Systems Military Scholarship**

Established in 2008 by General Dynamics Land Systems in honor of members of the United States military. Applicant must be active duty personnel of the U.S. Armed Forces or immediate family member pursuing a doctoral, master's, or bachelor's degree through CMU's Global Campus. Applicants must have successfully completed a minimum of six credit hours with CMU and earned a minimum GPA of 3.0.

**John Genette and Andrea Dickey Genette Award**

Established in 2009 by John Genette (Class of 1976) and Andrea Dickey Genette (1978). Income from the endowment will support a renewable award for a junior or senior enrolled in the College of the Arts and Media, Department of Theatre and Dance. The recipient will be pursuing theatre as a profession (does not have to be a theatre major) wishing to produce their own projects with a minimum GPA of 2.5. Please contact the Department of Theatre and Dance for further information.

**Michael "Gio" Giordano Helping Professions Award**

Established in 2013 by Michael "Gio" Giordano '71, '74, '10 to recognize the impact of his educational experience at Central Michigan University and to provide for those who pursue the goal of helping others. Income from the endowment will support a renewable award for undergraduate students having earned junior status, or graduate students who have completed 12 hours of graduate credit, who have elected the field of social work; professional counseling or clinical psychology. Recipient must have a minimum GPA of 3.5 in their major course of study. The award will be given on the basis of an essay not to exceed 500 words on the topic of the role of a helping professional in creating client self-reliance.

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**Glenn Family Foundation Scholarship**

Established in 2002 by Michael (Class of 1973) and Glenda Glenn. Income from the endowment will support a renewable scholarship for a sophomore, junior or senior enrolled in the College of Business Administration majoring in business. The student must have a minimum 2.5 GPA and exhibit financial need.

**Michael and Glenda Glenn Sales Institute Scholarship**

Established in 2008 by Michael (Class of 1973) and Glenda Glenn. Income from the endowment will support a renewable award for a student with a major or minor in the College of Business Administration, Department of Marketing, Hospitality, and Logistics Sales Institute. Recipient must be a sophomore or higher, have a minimum GPA of 3.0 and be a Michigan resident.

**Global Campus Endowed Scholarship**

Established in 2001 by alumni and friends of CMU's Global Campus for students pursuing a graduate or undergraduate degree. Applicants must have a minimum GPA of 3.0. Preference will be given to applicants who are single parents and/or unemployed.

**Goodwin Family Endowment for Study Abroad and International Experiences**

Established in 2008 by Keith (Class of 1974, 2006) and Janice Goodwin to support international learning for students in the College of Business Administration. Income from the endowment will support students who wish to study and/or intern abroad, providing funding for travel, room and board, program fees and other expenses associated with the international experience. Awards based on GPA, required essay, and faculty letter of recommendation.

**Theodore Goosen Award**

Established by family and friends in memory of Theodore Goosen, former owner of the Mt. Pleasant Malt Shop, for a junior or senior majoring in marketing or hospitality services administration.

**Mary Eddy Gover Award for Scholastic Excellence**

Established in 2018 by David Gover in memory of his spouse, Mary Eddy Gover '46. The recipient will be in their final semester of study toward their degree in Physical Education enrolled in The Herbert H. and Grace A. Dow College of Health Professions. The recipient(s) of the award will have achieved the highest GPA among all applicants for all NON-PHYSICAL EDUCATION courses. The recipient(s) will have completed their entire undergraduate degree at Central Michigan University. Transfer students are not eligible for this award.

**Deborah Baroli Govitz Scholarship**

Established in 1995 as a memorial by L. Scott Govitz and the CMU Department of Marketing, Hospitality, and Logistics for students majoring in hospitality services administration with a minimum cumulative GPA of 2.5 who have at least one full semester remaining before graduation. The scholarship is based on full-time enrollment and is not renewable.

**Grand Rapids Alumni Award**

Established in 2003 by Grand Rapids Area Alumni to support an endowed award for one or more full-time freshman students who reside in Kent and its contiguous counties. Transfer students are not eligible for this award.

**Grand Traverse Alumni Chapter Scholarship**

Established in 1992 through funds raised by alumni and friends in Grand Traverse County for undergraduate on-campus students and undergraduate or graduate Global Campus students (Traverse City Center) with demonstrated financial need. Students will be selected from five counties: Antrim, Benzie, Grand Traverse, Kalkaska and Leelanau counties.

**Great Lakes Bay Region Alumni Chapter Endowed Scholarship**

Established in 2004 by members of the Great Lakes Bay Region Alumni Chapter of Central Michigan University. Income from this endowment will be used to support a scholarship for an incoming freshman who can demonstrate financial need from Midland, Bay or Saginaw counties.

**Barbara P. Greene Endowed Scholarship in Political Science**

Established in 2004 by Sarah and Edward Cohen (daughter and son-in-law) and friends of Barbara Greene. Barbara was a professor and chair of the political science department prior to her death in 2001. Income from this endowment will support a scholarship for students enrolled in the political science department who have interest in state and local government. Recipient must possess a minimum GPA of 3.0 on a 4.0 scale. Preference will be given to a graduate student, followed by a senior or junior.

**Dr. Jay and Diana Griesser Endowed Scholarship**

Established in 2009 by Dr. Jay Griesser, a long-time CMU Global Campus adjunct professor, and wife Diana, in honor of members of the United States Military and Federal Service Employees. Applicants must be enrolled in an online program through CMU's Global Campus with preference given to students enrolled in a program leading toward a graduate degree in Business or Information Technology. Applicants must have completed at least six (6) credit hours and earned a minimum 3.4 GPA. Eligibility is limited to active-duty U.S. military personnel and members of their immediate family, U.S. military personnel serving in active reserve status, and U.S. federal service employees.

**Robin L. Racette Griffin Endowed Scholarship Fund**

Established in 2007 by Robin L. Racette Griffin (Class of 1976). Income from the endowment will support a renewable scholarship for a full-time undergraduate enrolled in the College of the Arts and Media. Eligible candidates must be a sophomore or higher and maintain a minimum overall GPA of 3.0 and demonstrate financial need.

**Edgar L. and Miriam Grim Scholarship**

Established in 1965 by family, friends and associates in honor of loyal alumnus, recognized humanitarian, and Michigan Deputy Superintendent of Public Instruction, Edgar L. Grim, for junior or senior students pursuing a teaching curriculum.

**David and Paulette Groen Study Abroad Award**

Established in 2017 by David '61 and Paulette Groen to support a study abroad scholarship for a full-time undergraduate student studying at CMU. Recipients must enroll in a CMU approved study abroad program for a semester or academic year and must be studying a World Language, although it need not be the major area of study. Student must reside with a host family while overseas for their study abroad program vs. staying in a residence hall facility. Recipients of the Scholarship must have a cumulative minimum GPA of 3.0.

**Shirley L. Gross-Moore Endowed Award**

Established in 2010 by Shirley L. Gross-Moore ('81) for Global Campus undergraduate students who have graduated from one of the following Detroit Michigan Public High Schools: Cass Tech, Cooley, Cody, Central, Denby, Finney, Henry Ford, Kettering, Mumford, Northern, Northwestern, or Southeastern. Preference will be given to first semester students.

**John and Carol Grossa/ Roy and Joan Klopocic Endowed Scholarship**

Established in 2018 by John and Carol Grossa and Roy '59 and Joan Klopocic '59. John and Carol are both retirees from CMU; John is a professor emeritus from CMU's Geography Department and Carol retired from the office of Student Disability Services. Roy is a professor emeritus from CMU's Geography Department and both he and Joan are 1959 alumni. Income from the endowment will support a renewable award for a full-time undergraduate or graduate demonstrating financial need. Recipient will be pursuing a degree in Geographic Information Services with the College of Science and Engineering.

**Gus and Lucille Grozdon Family Scholarship for Library Students**

Established in 2018 by Pamela L. Grozdon '77 in memory of her parents, Gus and Lucille Grozdon. Income from the endowment will support an award for a full-time undergraduate student employed at the Charles V. Park Library at CMU. Recipient will have a minimum cumulative GPA of 3.0 and will be enrolled in any major offered at CMU.

**Pamela L. Grozdon Meteorology Endowment**

Established in 2019 by Pamela L. Grozdon '77. Income from the endowment will support an award for a full-time undergraduate student majoring in Meteorology within the department of Earth and Atmospheric Sciences. Recipient will have a minimum cumulative GPA of 3.25 and preference will be given to students in their third or fourth year of study.

**Les Gruber Scholarship**

Established in 1985 by Jacoba Gruber, family and friends in memory of Les Gruber, former professor in the Department of Communication Sciences and Disorders, for students majoring in communication sciences and disorders.

**Rob and Liz Haar Cornerstone Endowed Scholarship**

Established in 2016 by Rob '96 and Liz Haar. Income from this renewable award will be for a freshman enrolled in the College of Business Administration who expresses an interest in pursuing an Information Systems degree who has a cumulative minimum GPA of 3.0 upon graduation as evidenced on his/her high school transcript. Students will demonstrate an interest in Information Systems within their application essay. Preference will be given to graduates of Cornerstone Schools in the Detroit region who demonstrate financial need.

**Dr. Nazem Haidar Memorial Fund**

Established in 2016 by Dr. Salma Haidar in memory of her late father, Dr. Nazem Haidar (1932 – 2013). Dr. Haidar was a professor and Dean at the School of Economics at Damascus University and was an expert at the United Nations for many years working in different countries in the Middle East. He valued education, especially in women and encouraged them to do so. The recipient will be an undergraduate student who is a sophomore or higher with a signed major or a graduate student within the School of Health Sciences in The Herbert H. and Grace A. Dow College of Health Professions with a minimum GPA of 3.5 or higher.

**Hales and Nolan Family Scholarship**

Established in 1990 by Glenn R. Hales and H. Marlene Hales, (Class of 1978) and renamed in 1992 to commemorate Marlene's parents, Lois and Delbert Nolan, Sr., for juniors or seniors with a 3.0 or higher GPA.

**Aaron C. Hall Scholarship**

Established in 1984 by family and friends in memory of Aaron C. Hall (Class of 1958), former director of financial aid and admissions counselor between 1965 and 1967, for Holt High School graduates as selected by Holt High School personnel.

**Arnold Hammel KME Endowed Award**

Established in 2008 by friends and colleagues in honor of Arnold Hammel (Class of 1962), mathematics professor emeritus. Income from the endowment will support an award for a full-time student majoring in mathematics and also an active member of Kappa Mu Epsilon, the mathematics honor organization.

**Marjorie E. Harris Endowed Scholarship**

Established in 2015 by Dr. Samuel E. Harris in memory of his wife Marjorie E. Harris '57. Income from the endowment will support a renewable award for a junior or senior enrolled in The Herbert H. and Grace A. Dow College of Health Professions, Nutrition and Dietetics program with a cumulative minimum GPA of 3.0.

**Harter Family Endowed Scholarship**

Established in 2015 by Donald and Mary Harter '65 and Todd Harter '94. Income from this endowment will be for a renewable scholarship for a full-time junior or higher student enrolled in the College of Business Administration with a cumulative minimum GPA of 3.0 or higher.

**Irvin W. and Velma C. Hartman Scholarship**

Established in 2005 by Irvin W. and Velma C. Hartman, friends of Central Michigan University and long-time members of the Mount Pleasant community. Income from the endowment will support a renewable scholarship for an undergraduate student who is applying to the teacher education program and has a minimum GPA of 3.0. Preference will be given to students from Isabella County, Michigan and then to any qualified student.

**Robert D. Hays Award for Excellence in Jazz**

Established in 1996 for a sophomore, junior, senior, or graduate student considered to be the most improved jazz musician. The recipient will be selected by the School of Music and will presented with this prize at the final jazz concert of the school year.

**Michael and Debra Hayes Endowed Scholarship**

Established in 2019 by Michael '73, '80, '09 and Debra Hayes '75, '96. Michael has previously served on CMU's Alumni Board and Advancement Board. He currently serves on the CMU Medicine Steering Committee. Income from the endowment will support a renewable scholarship for a full-time sophomore or higher student who demonstrates financial need and has a cumulative minimum GPA of at least 3.0.

**Health Administration Scholarship**

Established in 2021 by a donor who spent their career working for nonprofit agencies focusing on public health and social services. By creating this endowment, the donor wants to support a student studying health administration. The award is for a junior or senior enrolled in The Herbert H. and Grace A. Dow College of Health Professions majoring in Health Administration, with emphasis given to a student focusing on public health and social services for nonprofit agencies. Recipient will demonstrate financial need. First preference will be given to a student from Cheboygan, Emmet, or Mackinaw counties. If no students from these counties are eligible, a student from another Michigan rural community will be selected.

**Health Professions Dean's Endowed Scholarship**

Established in 2014 by alumni and friends of the Herbert H. and Grace A. Dow College of Health Professions. Income from this endowment will support a renewable award for a full-time student who has a signed major within the Herbert H. and Grace A. Dow College of Health Professions with a minimum GPA of 3.0. Recipient must demonstrate leadership in their discipline.

**Hensley Family Endowed Scholarship**

Established in 2013, the endowment was created by Virginia M. Hensley '45. Income from the endowment will support a scholarship for a student(s) enrolled in the teacher education program, with financial need and a minimum GPA of 3.0. Preference will be given to a student(s) from Isabella County. If there are no recipients meeting the above criteria it may be awarded to any qualified student.

**Michael Herceg and Joan A. Kelley Scholarship**

Established in 2006 by Michael Herceg and Joan A. Kelley (Class of 1968). Income from the endowment will support a renewable scholarship for an incoming freshman who plans to major in teacher education, has a minimum 3.0 GPA and is a resident of the State of Michigan. Financial need may be considered.

**Dr. W.E. Hersee and Idonea Lewis Hersee Endowed Scholarship**

Established in 2005 by Sandra and Dennis Olson in honor of Sandra's parents Dr. W.E. Hersee (Class of 1931) and Idonea Lewis Hersee (1931). Income from the endowment will support a renewable scholarship for a junior with a major in biology on the premedicine program and a minimum 3.5 GPA.

**Ruth Heyman Honors Scholarship**

Established in 2007 by the Ruth Heyman Foundation. Income from this endowment will support a renewable scholarship for a student(s) in the Honors Program demonstrating high financial need. Recipient will have a minimum GPA of 3.5 and a minimum ACT score of 25 and must retain Honors Program membership and an average 3.25 GPA in order to maintain the scholarship. Scholarship will be set at \$2,500 annually for up to four years. The scholarship may be received in addition to a Centralis Scholar, Centralis Gold or Leadership Advancement Award. Students are required to live in Larzelere Hall (Honors Residential Community) their first year and must remain on campus for their second year, but may live in another residence hall if desired. Preference will be given to student(s) who are not getting need based aid because they do not qualify for the Pell threshold.

**Dr. Tom and Louise Hickey Award**

Established in 2014 by Jamie L.H. Brown '03 and Christopher A. Brown '04 in honor of her parents who were educators in the state of Michigan. Income from the endowment will support a renewable scholarship for a student enrolled in the Teacher Education program in the College of Education and Human Services with a cumulative minimum GPA of 3.0. Preference will be given to a student who is a first generation college student.

**JoAnn Hinds Endowed Research Experience for Undergraduates**

Established in 2021 by JoAnn Hinds '72, '77, '09 to allow undergraduate students to be introduced to field biology at the Biological Station on Beaver Island. JoAnn's love for Beaver Island and passion for the sciences is something that she would like all students to have an opportunity to experience. Student recipient to be enrolled in the summer 'introduction to field biology' course (or its future equivalent) at the Biological Station on Beaver Island. Recipient may be a high school sophomore, junior or senior that meets the CMU admissions requirements for dual enrollment or an incoming freshman or sophomore. Recipient will have a cumulative minimum GPA of 3.0.

**Helen L. Hodges Scholarship Award**

Established in 2015 by Russell '78 and Barbara Scaffede in honor of Barbara's mother, Helen L. Hodges, '43 an early elementary teacher. Income from the endowment will support a renewable award for a student enrolled in CMU Global Campus who has an interest in the study of education and is a State of Michigan resident.

**Joyce E. Hoffer Music Endowed Scholarship**

Established in 2006 by Joyce E. Hoffer (Class of 1954). Income from the endowment will support a scholarship for a freshman who has a high potential for success in music education and a minimum GPA of 3.2. First preference will be given to elementary music majors with second preference given to vocal music majors. This scholarship is renewable.

**Joan L. Hogan Award**

Established in 2013 by Joan L. Hogan '67, '68, retired CMU Counseling and Special Education Faculty. Income from the endowment will support a renewable award for a student(s) enrolled in Teacher and Special Education, admitted to the Special Education program. Recipient will have a minimum cumulative GPA of 3.0 and demonstrate financial need. Preference will be given to students involved in the Connections that Count program.

**Rose J. Hogue Scholarship**

Established in 1985 in honor of Rose J. Hogue, a professor in the Department of Home Economics from 1919 to 1953, for a junior or senior majoring in the Nutrition and Dietetics program with a 3.0 or higher GPA.

**Holen Family Endowed Music Fund**

Established in 2007 by Mark Holen '70. Distributions from this fund will be divided equally for the two purposes listed below, both within the School of Music.

**Scholarship**

Established in 2010 by Mark Holen '70 and the Holen Family. Income from this endowment will support a renewable scholarship for a student who is a music major. First preference will be given to a resident from Genesee County, MI whose primary instrument is percussion. Second preference will be given to a resident from Genesee County, MI who is interested in pursuing a concentration in jazz (consideration will be first given to a student whose concentration is jazz piano). Third preference will be given to a resident from Genesee County, MI who is a music major with any instrument. Fourth preference will be given to a Michigan resident who is a music major with any instrument. Undergraduate students, including freshmen, must be a full-time student. An incoming freshman may apply for the scholarship but must have attained a 3.0 in high school and display a high level of music proficiency and excellence. See the College of the Arts and Media for more detail.

**Project Funding**

Projects may include, but not limited to: capital improvements designed to enhance facilities associated with the School of Music; the acquisition of capital equipment or other material resources that directly support the training and skills development of music students at CMU; and costs associated with the scheduling or hosting of programs, workshops, guest speakers or more that directly support the training and skills development of music students at CMU.

**Honors Alumni Endowed Award**

Established in 2005 by alumni of the Honors Program. Income from the endowment will support a renewable award for students in good standing with the Honors Program, have a minimum 3.25 GPA and who have completed 56 credit hours.

**Laurene A. Horiszny Outstanding Student in Early Childhood and Elementary Education Award**

Established in 1991 through the estate of Laurene A. Horiszny for students pursuing careers in early childhood and elementary education.

**James E. Hornak Endowed Award**

Established in 2009 by colleagues, former students, and family of Dr. James E. Hornak (Class of 1965, 1966), retired chairperson of the Department of Physical Education and Sport. Income from this endowment will support a renewable award for a student enrolled in a graduate degree program of the Department of Physical Education and Sport in The Herbert H. and Grace A. Dow College of Health Professions who has a minimum GPA of 3.3. If no recipients fit the criteria, it may be awarded to any signed major within the Department of Physical Education and Sport within The Herbert H. and Grace A. Dow College of Health Professions.

**Hostutler Scholarship**

Established in 1980 by Kenneth L. and Margaret J. Hostutler, residents of Mt. Pleasant and loyal friends of CMU.

**Jeanette R. House Memorial Scholarship**

Established in 1998 by family and friends to honor her enthusiasm for learning and to encourage students who are pursuing majors in literature or related subjects. Scholarships will be awarded to CMU students entering their senior year who have declared a major or specialization in literature.

**Gongzhu Hu and Shu Lu Endowed Award in Computer Science**

Established in 2009 by Dr. Gongzhu Hu and Mrs. Shu Lu. Dr. Hu is a professor in the department of computer science and Mrs. Lu also is employed at CMU in the Office of Scholarships and Financial Aid. The recipient of the award will be an authorized computer science major, at least a sophomore standing and have a 3.5 GPA.

**Robert E. Hutchinson Memorial Scholarship**

Established in 2010 in memory of Robert E. Hutchinson (Class of 1964). Robert was named outstanding sophomore cadet in ROTC and was president, treasurer and pledge trainer for Tau Kappa Epsilon fraternity. Income from the endowment will be used for a renewable award for a junior or higher in the College of Business Administration. Recipient selection will be based on leadership involvement within the College of Business Administration, the University community and within other activities that allow for leadership opportunities.

**Independent Bank Endowed Scholarship**

Established in 2006 by Independent Bank of Bay City, Michigan. Income from the endowment will support a renewable scholarship for a low to moderate income student as defined by HUD median family income limits: [http://www.huduser.org/portal/datasets/il/il2013/select\\_Geography.odn](http://www.huduser.org/portal/datasets/il/il2013/select_Geography.odn). Recipient will be enrolled in the College of Business Administration with a minimum GPA of 3.0. Preference will be given to residents of one of the following counties: Arenac, Barry, Bay, Eaton, Genesee, Huron, Ingham, Ionia, Isabella, Jackson, Kent, Lapeer, Macomb, Mecosta, Midland, Montcalm, Muskegon, Newaygo, Oakland, Ottawa, Saginaw, Sanilac, Tuscola or Wayne.

**Independent Order of Odd Fellows Award**

Established in 1990 by Mt. Pleasant, MI, Lodge #217 for Michigan residents enrolled at CMU who have earned a 2.0 or higher GPA. Initial gifts to create the endowment were made in memory of former lodge members Roy F. Robison and Harley Philo.

**Information Systems (IS) Student Award**

Established in 1999 by the Department of Business Information Systems for an IS major with a 3.0 GPA overall and in IS courses. Preference will be given to members of The Association for Information Technology Professionals (AITP).

**Interdisciplinary Degree Programs Endowment**

Established in 2004 by Richard (Class of 1972) and Mary Lou Hazleton (1986). Mary Lou is a retired speech/language pathologist and current member of CMU's Development Board. Richard is president and CEO of The Charles J. Strosacker Foundation in Midland and is retired as Chairman and CEO of Dow Corning Corporation. Income from this endowment will be used to support interdisciplinary degree programs in the College of the Arts and Media including music theatre and integrative public relations for needs such as renewable scholarships, supplies and equipment, program support and guest artist/guest speakers. When used for scholarships, the recipients will be those who demonstrate outstanding promise in their field as determined by the program council.

**Irgang Elementary Education Scholarship**

Established in 2003 by Dr. Frank J. (Class of 1950) and Virginia Irgang. Dr. Irgang is a published author and professor emeritus from San Diego State University. Proceeds from the endowed scholarship will support two students enrolled in the Department of Elementary Education who are interested in pursuing a teaching career. Recipient must possess a minimum 2.7 GPA, be a Michigan resident, and enrolled full time at CMU. The scholarship is not renewable and preference will be given to students graduating from secondary schools in Lapeer County, Michigan.

**Frank and Virginia Irgang Scholarship**

Established in 1995 by Frank Irgang (Class of 1950) and Virginia Irgang for Michigan resident, junior and senior students majoring in industrial engineering and technology. The scholarship is based on full-time enrollment and not renewable.

**John N. Irwin Scholarship**

Established by friends and family of John Irwin, member of the Department of Music from 1967 to 1976, for advanced piano students deemed worthy and needy of an advanced scholarship.

**Jack-Rowe Scholarship**

Established in 2016 by the estate of Madge J. '50 and Edwin Rowe. Madge was a high school counselor and wanted to help students in the same way that she was helped. Income from this endowment will support a renewable award for a full-time student demonstrating financial need with a cumulative minimum GPA of 3.0 or higher.

**Jacobs Family Endowed Scholarship**

Established in 2017 by Dr. Karen '83, '85 and Michael Jacobs '84. Income from this endowment will support an award for a full-time student pursuing a Doctor of Audiology degree in the Department of Communication Sciences and Disorders within the Herbert H. and Grace A. Dow College of Health Professions. Recipient will be a third year student demonstrating an interest in private practice audiology through a written essay.

**Jakolat Family Endowed Scholarship**

Established in 2017 by Michael '83 and Jody Jakolat in honor of Michael's parents, Vern and Mary Jakolat. Income will support a renewable award for a student enrolled in the College of Business Administration. Recipient will be pursuing a major within the School of Accounting in their junior or senior year with a cumulative minimum GPA of 3.0. Provided the previous mentioned criterion is met, preference will be given in the following priority order: a) Students who have graduated from Alma High School, Alma Michigan; b) Students who have graduated from a high school in Gratiot County, Michigan; c) Students who have graduated from a high school in Kent County, Michigan.

**Willie Frances and Robert Louis James, Sr. Endowed Award in Business**

Established in 2012 by Robert James, Jr. '85 in honor of his parents, Willie Frances and Robert Louis James, Sr. Income from this endowment will be used to fund a renewable scholarship for a full-time student enrolled in the College of Business Administration with a major or minor in business. Recipient must have completed at least one semester of academic coursework and maintain a 2.5 overall GPA. The award is also to be used to help support educational diversity and preference will be given to students from historically underrepresented populations, especially those who are first generation college students and are willing to promote diversity on campus.

**James R. and Anita H. Jenkins Endowed Scholarship**

Established in 2015 by James R. and Anita H. Jenkins. Income from this endowment will support four annual awards. There will be an annual scholarship for each of four academic levels (incoming freshman, sophomore, junior and senior). Students are eligible to renew once annually for up to four years, regardless of when the student makes the "technical" transition from one grade level to the next, as long as they remain a full-time student and maintain a satisfactory GPA. Preference will be given to students who demonstrate leadership and community involvement and attended a public high school in Saginaw, Bay City, Ypsilanti, Willow Run, Detroit, Flint and Midland, MI; Rock Island, North Chicago, Waukegan, Moline and Chicago, IL; Cedar Rapids, and Davenport, IA; Memphis and Jackson, TN with a cumulative minimum GPA of 2.5.

Recipient will provide an essay (3 pages or less) relevant to current events in the African-American community with the first topic focused on the following: In light of the "Black Lives Matter" movement, discuss its relationship to the opportunity gaps in two or more of the following key U.S. systems of education and academic achievement, labor and employment, social and/or criminal justice, physical and/or mental health, income and wealth equality, etc.

**Jeanisse-Richard Endowed Scholarship for Study on Beaver Island**

Established in 2021 by Dina and Robert Richard to honor both of their fathers and to support students' study on Beaver Island, thereby benefiting the Great Lakes. It is the Richards' hope that students receiving the renewable scholarship will pursue a career that benefits and protects the Great Lakes. Recipients will be pursuing a degree within the College of Science and Engineering and enrolled in a course or a research project taking place on Beaver Island with a minimum cumulative GPA of 2.5.

**L.A. Johns/Isabella Bank Endowed Scholarship in Finance**

Established in 2003 by Isabella Bank in honor of Larry Johns, retired president/CEO/director of Isabella Bank and former CMU Development Board member. Income from the endowment will support scholarships for domestic and international students to study finance or personal financial planning. Preference will be given to international students. Visit the College of Business Administration for further details.

**David and Linda Johnson Endowed Award**

Established in 2011 by David C. and Linda M. Johnson (Class of 1975, 1999). Income from the endowment will support a renewable award for a student enrolled in the teacher education program in the College of Education and Human Services. Preference will go to a student from a rural area.

**Dr. Frank D. and M. Virjean Johnson Endowed Scholarship**

Established in 2000 by Dr. Frank D. Johnson, (Class of 1950), former director of Continuing Medical Education at Central Michigan Community Hospital and his wife M. Virjean (1951), former elementary teacher, for a sophomore, junior or senior, 3.5 GPA, majoring in chemistry, biology or physics. Alternate year awarded to a science major in teacher education.

**J. Edward Johnson Scholarship**

Former Mt. Pleasant city commissioner and mayor, J. Edward Johnson, moved from Mt. Pleasant to Denver, CO, in 1982. In recognition of his interests and energies dedicated to Mt. Pleasant and well being of CMU, friends established this \$1,000 scholarship for a College of Business Administration student bearing a high scholastic average in need of financial assistance to continue higher education.

**Judy Johnson Endowed Scholarship**

Established in 2005 by Bill (Class of 1965, 1970) and Judy Johnson. Bill is President of The Berean Group, LLC, in Newaygo, a member of the university's National Campaign Committee and former chair of the Board of Trustees. Judy is a graduate of Newaygo High School and worked at CMU's Park Library. Income from the endowment will support a renewable scholarship for an incoming freshman from Newaygo High School. The recipient must demonstrate financial need and have a minimum GPA of 3.0.



**Irene F. Jorae Scholarship**

Established by Rodney J. Rogers as a loan fund in November, 1966, to commemorate dedicated teacher, friend and counselor who gave 36 years of service to CMU. The fund was converted to an endowed scholarship in 1994 for a student majoring in biology (premedical included) as awarded by the Department of Biology.

**Antonio Leon Jordan Award**

Established in 2021 in honor of Antonio Leon Jordan '12 by Dr. Susan Grettenberger and the rest of his family as well as many friends. Antonio left a legacy of public service and had a love for books and teaching, especially of children and youth who were at risk. This scholarship is intended to support the success of students who are from traditionally under-represented groups and consideration should be given to those committed to working with historically underserved or underprivileged populations and who demonstrate service to the public via extracurricular/volunteer experience. Recipient will be a returning student demonstrating financial need with a cumulative minimum GPA of 2.5 or higher. Preference will be given in the following order: 1) has received a Pell Grant 2) 3.25 or lower GPA 3) enrolled in one of the following programs: Political Science, Educational Leadership, Public Administration, Social Work, Sociology, Teacher Education, Special Education, and Pathways to Academic Student Success.

**Tyrone Jordan Endowment**

Established in 2003 by Tyrone Jordan, Executive Assistant to the President of Central Michigan University. The endowment will benefit an entering freshman from the city of Detroit who shows an interest in the advancement of minorities in American society and who has a cumulative minimum GPA of 2.5. Student must have attended a school in Detroit, not necessarily a public school.

**Frank and Rita Jozefaciuk and Aunt Irene Rutkowski Endowed Award**

Established in 2006 by the family of Frank and Rita Jozefaciuk and Aunt Irene Rutkowski. Income from the endowment will support a renewable award for a junior or senior with a math major. Recipient must be a U.S. citizen, Michigan resident, and possess a minimum 3.4 GPA. Engineering, computer science, and statistics students will also be given consideration.

**Dr. Frederick C. and Lois M. Kabbe Scholarship**

Established in 2012 by Robert '78 and Connie Kabbe '97 and Jon and Alice Kabbe in memory of their parents, Dr. Frederick C. (PhD) and Lois M. Kabbe (MS)'61. Dr. Kabbe was a CMU chemistry professor. Lois Kabbe was a mathematics and science educator and a driving force in their life-long learning endeavors. Dr. and Mrs. Kabbe were more than just educators, they generously supported the CMU Clarke Historical Library with materials that became, at one time, one of the most highly referenced holdings of the library for research purposes. Income from the endowment will support a renewable award for an undergraduate student enrolled in the College of Science and Engineering with a minimum 3.0 GPA. Preference will be given in this order for a part-time or full-time student: 1) who has aged out of the foster care system; 2) who is the sole parent in a sole-parent household; 3) who graduated from an Isabella or contiguous county high school.

**Eric H. Kadler Award for Study Abroad**

Established in 2005 by Dr. Eric H. Kadler, former CMU employee. Income from the endowment will support an award for students studying abroad. The recipient will be a junior or senior with a 2.7 overall GPA and a 3.0 GPA in a major of French, German or Spanish and a major or minor in another World Language.

**Dr. Thomas and Mrs. Jayne Keating Athletic Training Education Program Scholarship**

Established in 2000 by Dr. Thomas and Mrs. Jayne Keating. Income from this endowment will support a scholarship for a student entering his/her third semester in the professional phase of the athletic education program in the Department of Physical Education and Sport. The recipient must be full time with a signed major in athletic training/sports medicine with a 3.0 GPA. Also considered will be leadership skills, accomplishments, cocurricular activities, and financial need.

**Tricia Keith Endowed Fund for Study Abroad Experiences**

Established in 2016 by Trustee Tricia Keith '93, CMU Board of Trustees. Income from this endowment will support a renewable award for a student participating in a study abroad program. The study abroad experience will last for a duration of at least one semester and the recipient must have a cumulative minimum GPA of 3.0. The study abroad experience will be international and focused upon an academic program or research experience. Destinations within the U.S. or alternative spring break (or similar) programs are not eligible.

**Don W. Kelsey Scholarship**

Established by family and friends in 1982 for students meeting Board of Trustees' criteria. Don W. Kelsey was instrumental in the development of new materials-handling equipment that aided the efforts of our country during World War II. Following the war, Don served the automobile and related industries by providing materials handling and materials storage equipment, which he often designed, through the Don W. Kelsey Company. Mr. Kelsey was a supporter of higher education through annual contributions, and was particularly interested in CMU Special Olympics efforts.

**Phillip and Suzanne Kench Scholarship**

Established in 2006 by Phillip (Class of 1977) and Suzanne (1964) Kench. Income from the endowment will support a scholarship for a junior or senior majoring in management, marketing, human resources, accounting, or who has an interest in the study of business and has a minimum GPA of 2.75. Preference will be given to a Michigan resident who can demonstrate financial need.

**Lornie G. & Midge A. Kerr Scholarship Fund**

Established in 2018 by The Kerr Family, in memory of their parents, Dr. Lornie G. '54, '59 and Margery A. "Midge" Kerr. Dr. Kerr previously had been on many boards at CMU, including Alumni Board, Advancement Board and the President's Advisory Board. Income from the endowment will support a renewable award for a student who is from a Michigan-based high school, demonstrating financial need with a cumulative minimum GPA of 2.7. Recipient will be enrolled in the Department of Teacher Education and Professional Development.

**Marianne J. Kerr Scholarship**

Established by family and friends in 1982 shortly after her untimely death at age 40 for students meeting Board of Trustees' criteria. Marianne J. Kerr was a dedicated fifth grade teacher at Pullen School in Mt. Pleasant and spouse of former university attorney, J. David Kerr.

**Thelma Key Scholarship**

Established in 1985 through the estate gift of Thelma Key (Class of 1924, 1942). Thelma retired from the Grand Rapids public school system in 1966.

**Dr. Donald Kilbourn Endowed Scholarship in Counseling**

Established in 2021 by Margaret Ann Bogle '79 in honor of Dr. Donald Kilbourn, the first Director for CMU's Counseling Center. Income from the endowment is intended to help a student pursue and graduate with a master's degree in Counseling at Central Michigan University. The hope is to produce counselors that resemble the same skill and passion as that of Don Kilbourn. According to Dr. Kilbourn's past colleagues, he excelled at building strong, trustworthy relationships and always had a deep passion for helping everyone with whom he came in contact. Recipients will be students currently enrolled in the master's level Counseling Program in the College of Education & Human Services. Students pursuing completion in either single or dual concentration plan are eligible. First preference given to those students pursuing the Addiction Counseling concentration and/or preference is given to students from historically underrepresented populations. If no student applications are pursuing those two preferences, any student enrolled in master's level Counseling Program in EHS is eligible. The recipient does not need to demonstrate financial need.

**Philip Kintzele Accounting Scholarship**

Established in 1986 for a non-Centralis scholar School of Accounting senior. Recipient will be pursuing an MBA and will have completed at least 100 credit hours with the highest overall grade point average of those applying for the scholarship.

**Philip Kintzele Accounting Transfer Students' Scholarship**

Established in 1992 for students who transfer to CMU's School of Accounting who have earned at least 30 credit hours (six credit hours in accounting).

**Leo J. Kipfmuehler Endowment Fund for the Summer Remedial Clinics**

Established in 2002 by the Department of Communication Sciences and Disorders to recognize Dr. Kipfmuehler's contributions to the success of summer remedial clinics. After graduating from CMU with a B.A. in 1955 and an M.S. in 1960, Dr. Kipfmuehler served 33 years in a number of capacities for the SRC, including student, staff member, faculty supervisor, and director of the program. He worked as a CMU faculty member for 24 years and retired in 1992. Proceeds from the endowment will be used to provide revenue annually to fund scholarships for children without sufficient financial resources to pay summer remedial clinic fees.

**Michael J. Kirkpatrick Leadership Award**

Established in 1997 by family and friends in memory of Michael J. Kirkpatrick. It will be awarded to a CMU student who has demonstrated exemplary leadership skills in college and/or high school, demonstrated a high level of civic involvement and volunteerism while in college and/or high school, and maintains a high level of involvement with extra-curricular activities at CMU.

**Pam Klein Memorial Endowed Journalism Scholarship**

Established in 2006 by Bruce Hetrick and family and friends, in memory of Pam Klein (Class of 1977). Income from the endowment will support a renewable scholarship for a student majoring in journalism. Recipients of the scholarship must be junior/senior with an a minimum 3.0 overall GPA and a 3.3 in journalism courses. Preference will be given to CM Life journalists or editors. For more detailed information see the School of Communication, Journalism, and Media.

**Thomas S. Knapp Alumni Field Camp Scholarship**

Established in 1986 by the Department of Earth and Atmospheric Sciences for students with the appropriate background for admission to a summer course in geology.

**Robert E. and Cordelia B. Kohrman Scholarship**

Established in 2005 by Robert E. and Cordelia B. Kohrman. Income from the endowment will be used to support a scholarship for a junior enrolled in the College of Science and Engineering, who has a signed major in chemistry, a minimum GPA of 3.2, and demonstrates outstanding performance in organic chemistry. The scholarship will be renewable for up to two years.



**Arthur Loren Kontio Outstanding Young Biologist Award**

Established by Arthur Loren Kontio in 1993 to recognize, encourage and praise the outstanding achievement of young biologists at CMU.

**Koopman Memorial Scholarship Fund**

Established in 2004 by Dr. Margaret O. Koopman Joy (Class of 1926), who taught social science at Central Michigan University. The income from this endowment will fund a renewable scholarship for students who have been accepted in the Teacher Education Program, have a minimum 3.0 GPA and are majoring in one of the social sciences: sociology, political science, economics, history or geography.

**Nancy and Ted Kortess Spanish Award**

Established in 1993 for students studying in Spain or Latin America. Recipients must have a signed major or minor in Spanish and maintain at least a 3.0 GPA in Spanish classes.

**Krantz Family International Study Award**

Established in 2018 by The Joseph and Karen Krantz Family Charitable Foundation. Income from this endowment will be used to support a scholarship within the College of the Arts and Media, School of Music. The recipient will be a declared music major and must participate in a qualified study abroad experience. Students applying for the award should include a resume, letter of recommendation, and brief essay describing their interest in study abroad as it pertains to their educational experience and professional goals. Preference will be given to students enrolled as a major in Vocal Music and those that have not previously participated in a study abroad experience. If there are no study abroad applicants within the School of Music, the award may be used for other international travel that contributes to a student's academic and professional success, such as conferences, competitions, and other activities.

**Fredrick and Rosemary Kreft Endowed Scholarship Award**

Established in 2003 by Ira (Class of 1977) and Anne Kreft. Ira is a current member of the CMU National Campaign Committee, Dean's Business Advisory Council, alumni and development boards. Income from the endowment will support a renewable scholarship for an incoming freshman who intends to study accounting, has a minimum GPA of 3.5, and a composite ACT score of 24 or higher. Preference will be given to students from specific counties in Michigan; visit the College of Business Administration for further details.

**Olive Hutchinson Kries Biology Scholarship**

Converted in 1996 from a loan fund established in 1976 through the estate of Dr. Olive Hutchinson Kries, an esteemed member of the Department of Biology from 1936 to 1960. Spendable investment income will be awarded to CMU biology majors who have completed at least 30 total CMU credit hours prior to application and who have earned a 3.45 or higher GPA based on a 4.0 scale as selected by the Department of Biology.

**Ole H. Kristofferson Award**

Established as a loan fund by family and friends in 1974 and converted to an endowment in 1990 to commemorate Dr. Kristofferson, former senior member of the first faculty of the Department of Geology, for an award or appropriate equipment to geology students based on merit or achievement.

**Edward J. Kuhn Endowed Scholarship**

Established in 2014 from the estate of Edward J. Kuhn '49. Income from the endowment will support a renewable scholarship for a full-time student enrolled in the Teacher Education program in the College of Education and Human Services. Recipient will have maintained a cumulative minimum GPA of 3.0 and demonstrate financial need.

**Mabel and DeWayne Kyser Scholarship**

Established in 2004 by Nickolas Kyser and family and friends of Mabel (Class of 1937) and DeWayne Kyser (1935). Income from this endowment will support a renewable scholarship for students enrolled in the College of Education and Human Services and who are admitted to the teacher education program, have a minimum GPA of 3.0, and able to demonstrate financial need.

**LaBelle Management Scholarship**

Established in 1995 to reward junior hospitality services students for their excellence in either service or academics, and to strengthen the students' education. The selection shall be coordinated through the department chair of Marketing, Hospitality, and Logistics.

**Gilles Labrie Scholarship**

Established in 2006 by John G. Labrie '89 in honor of his father Gilles Labrie, professor of foreign languages, literatures and cultures at CMU. Income from the endowment will support a renewable scholarship for a full-time sophomore, junior, or senior with a signed major in French and a minimum GPA of 3.0.

**Langenburg-Dunn Endowed Scholarship**

Established in 2007 by Edward R. (Class of 1966, 1970) and Kathryn R. Langenburg (1964). Income from the endowment will support a renewable award for a junior or senior pursuing a bachelor of science in education, secondary education emphasis, majoring in math with a minimum GPA of 3.0. First preference will be given to a student from Bay City, then Bay County, then Michigan.

**George N. and Ernestine R. Lauer Scholarship**

Established in 1989 by George and Ernestine Lauer in appreciation of CMU and their family for a renewable scholarship for a Michigan resident junior with a 3.0 or higher GPA majoring in mathematics, computer science, speech pathology or English.

**Roger and Kay Lee Endowed Scholarship in Computer Science**

Established in 2010 by Dr. Roger and Kay Lee. Dr. Lee is a professor in the department of computer science. The recipient of the award will be a sophomore, authorized computer science major, and have a 3.5 GPA.

**Lee Statistics Endowed Award**

Established in 2013 by Dr. Carl Moun-Shen and Ye-Fu K. Lee '94. Both Carl and Ye-Fu are CMU employees. Carl is a statistics professor in the Department of Statistics, Actuarial and Data Sciences and Ye-Fu is an SAP applications programmer. Income from the endowment will support an award for a sophomore or higher student enrolled in mathematics. Recipient will be majoring in statistics, with a minimum 3.5 GPA, and receiving an A in both Calculus 1 and Elementary Statistics.

**Jean M. Leslie Endowed Scholarship**

Established in 2012 from the estate of Jean M. Leslie '69, '72. Income from the endowment will support a renewable award for a full-time junior level or higher student enrolled in the College of Education and Human Services, majoring in Elementary Education with a minimum GPA of 3.0.

**Bessie Cooper Lewis Scholarship**

Established in 1990 by family members in memory of Bessie Cooper Lewis for a senior who has been accepted into the teacher education program. Preference will be given to students in elementary education.

**Dorothy Warriner Lewis Scholarship**

Established in 1990 by family members in memory of Dorothy Warriner Lewis for a senior who has been accepted into the teacher education program. Preference will be given to students in elementary education.

**Lichtenfelt Scholarship**

Converted in 1988 from a loan fund established in 1967 by Richard J. Lichtenfelt, Jr. and family in memory of Richard, Ruth, and Wendell Lichtenfelt, parents and brother, for a junior or senior with preference given to hotel and restaurant management, law, ministry or K-12 education majors.

**Heather Lichtle Memorial Scholarship Fund**

Established in 2002 by friends and family of Heather Lichtle, former CMU student. Proceeds from the endowment will be used to establish a renewable scholarship for a student enrolled in the College of Education and Human Services who has an interest in teacher education and a GPA between 2.7 and 3.5. Applicants must complete an essay describing their reasons and motivation to pursue a career in education.

**Leslie and Leonard Lieberman Scholarship**

Established in honor of Leslie Lieberman, a specialist in family studies and faculty member at CMU from 1965 until her death in 1992, and Leonard Lieberman, specialist in physical anthropology and faculty member at CMU from 1965 until his retirement in 2004. Applicants must be majors in sociology, anthropology, social work or family studies; have a GPA of 3.4 or better; and be a junior or senior in the semester following application. Recipients are chosen on the basis of excellence in academic performance and writing skills as demonstrated in an essay describing career goals to be submitted with the application. Several awards are made each year and vary from \$500 to \$1,000.

**Elma I. Lighter Scholarship**

Established by Miss Lighter, member of the English faculty from 1932 to 1959, to honor students. The recipient must be in good academic standing and active in the university community.

**Lighthouse Scholarship**

Established in 2022 by Robert and Shayne Wuerfel for undergraduate Centralis Gold Award winners. Recipient may be from any major or field of study and demonstrating financial need. Recipient will meet all other requisite criteria associated with the Centralis Gold Award program.

**Damon P. Lindley Achievement Award**

Established by family and friends of Damon P. Lindley, an executive of Wyandotte Cement Corporation. The purpose of the award is to aid graduating seniors in the Department of Business Information Systems during their final semester. Selection is based on overall academic achievement, initiative and contribution to the department.

**David and Kathleen Ling Endowed Scholarship in Forensics**

Established in 2013 by the friends and family of David and Kathleen Ling. The recipient will be a full-time student involved in Debate as an extracurricular activity.

**Dr. David S and Bernice A. Nelson Lirones Scholarship**

The Lirones Loan Fund, established in 1960 to honor parents Mr. and Mrs. Sam Lirones and Mr. and Mrs. Edward Nelson, was converted to an endowed fund in 1988 for a junior student with a 3.0 or higher grade point average with preference given to pre-medicine and osteopathy, teacher education or science majors.

**Helen M. Lohr Scholarship**

Established in 1987 through the estate of Helen M. Lohr for a student within the Department of Human Development and Family Studies.

**Kirk H. Love Scholarship Endowment**

Established in 2006 by Kirk H. Love (Class of 1977). Kirk is a current member of the CMU Development Board and the College of Business Administration Campaign Committee. Income from the endowment will support a renewable scholarship for a student who has an interest in the study of finance or personal financial planning, a minimum GPA of 3.5, and qualifies for CMU's Board of Trustees Scholarship.

**Lee R. Lyons Prize**

Established in 1989 in memory of Lee R. Lyons through a bequest from Charles Maxwell Lyons for a senior with a 3.25 or higher GPA majoring in early childhood and elementary education.

**Jette MacNeil Endowed Scholarship Fund**

Established in 2001 by the Estate of Jette MacNeil (Class of 1994), formerly known as Jette Bookless of Rochester Hills. Proceeds from the endowment will be used to support scholarships, room and board, textbooks and other related expenses for students with demonstrated financial need by university standards.

**Alan W. Madsen Scholarship Fund**

Established in 2000 by Alan W. Madsen (Class of 1968), founder and former president of Corporate Personnel Consultants, Inc., and his wife Janet E. Madsen. The scholarship will be awarded to a sophomore, junior or senior in the College of Business Administration with a minimum 2.8 GPA; preference will be given to members of Alpha Kappa Psi national business fraternity.

**Gilbert O. Maienknecht Communications Scholarship**

Established in 1982 by family, friends and former students for merit scholarships to students in journalism, student media and broadcasting with selection made by the School of Communication, Journalism, and Media in consultation with the other two areas. Dr. Maienknecht was a member of the faculty from 1948 until retirement in December 1982. He was founder of both the Department of Journalism and Information Services.

**George and Vivian Malewska Scholarship**

Established in 1995 by Dale '75 and Carol Malewska and siblings in memory of their parents. The scholarship is for students majoring in Journalism with a news/editorial concentration and who may also be involved with and/or working for CM Life newspaper or Grand Central Magazine. The recipient shall have an interest in pursuing a career in journalism and will have a cumulative minimum GPA of 2.5 or higher; financial need may be also used as consideration. Previous recipients who are not a graduating senior, may reapply; however, there is no guarantee that person will again receive the award. The selection will be made by the School of Communication, Journalism, and Media in order to allow better exposure to qualifying students.

**Susan Colby Maly Endowed Scholarship**

Established in 2013 by Timothy J. Maly '74, family and friends in memory of Susan Colby Maly '73. Income from the endowment will support a renewable scholarship for a student whose family is or has experienced financial hardship due to the excessive costs and other related expenses of treating family cancer patients. Recipient will be a junior or senior enrolled in the Teacher Education program in the College of Education and Human Services with a cumulative minimum GPA of 3.0. Preference will be given to a student who has graduated from Perry High School.

**Joanne Sue Manshum Scholarship**

Established in 2008 by the estate of Joanne Sue Manshum '60. Income from this endowment will be used to support a renewable scholarship for a student majoring in Teacher Education. Preference will be given to students in Elementary Education with a minimum GPA of 3.0.

**Marble Family Endowed Award**

Established in 2010 by Bruce (Class of 1975, 1976) and Diane Marble (1984) and family. Income from the endowment will support an award for a student enrolled in the College of Business Administration with a minimum GPA of 3.0. Recipient will use the award to offset the expenses of study abroad or an international internship.

**Dr. Edward T. Marquardt Teacher Education Award**

Established in 2013 by Erna Marquardt, in memory of her husband, Dr. Edward T. Marquardt, professor emeritus. Income from the endowment will support an award for junior or senior enrolled in the College of Education and Human Services who has earned a minimum GPA of 3.0 and has been accepted in to the teacher education program.

**Margaret E. Sanford Marquardt Memorial Endowed Scholarship**

Established in 2007 by Richard G. Marquardt (Class of 1959), in memory of Margaret E. Sanford Marquardt (1955, 1960). Income from the endowment will support a renewable scholarship in the Department of Communication Sciences and Disorders for either a graduate student with a 3.5 GPA or higher or an undergraduate with a 3.25 GPA or higher. First preference will be given to a physically challenged graduate student and then a physically challenged undergraduate student registered with the Office of Student Disability Services. For further information see the Office of Scholarships and Financial Aid.

**Richard Allen Martens Endowed Scholarship for Military Personnel and Families**

Established in 2018 by the estate of Dr. Richard Allen Martens '59. Income from the endowment will support a renewable award for an undergraduate or graduate exclusively within the Veterans' Resource Center. The recipient will be active military personnel, a veteran, or a qualifying dependent demonstrating financial need. Verification of eligibility is required.

**Dr. Dale F. Martin Endowed Scholarship**

Established in 2018 by Dr. Dale F. Martin '81. Income from the endowment will support a renewable award for a student enrolled in the teacher education program in the College of Education and Human Services pursuing an elementary education certification. Recipient will demonstrate financial need with a minimum cumulative 3.0 GPA.

**Linda Jaye Masak Scholarship**

Established in 1990 by the parents of Linda Jaye Masak for juniors or seniors majoring in accounting as awarded by the School of Accounting.

**Mason County Endowed Scholarship**

Established in 2015 by Trustee Tricia Keith '93, CMU Board of Trustees. Income from this endowment will support a renewable award for a full-time incoming freshman who graduated from high school with a minimum GPA of 3.0. Preference will be given to students who have graduated from a Mason County, Michigan high school. If there is not a freshman applicant from a Mason County, Michigan high school and the scholarship is not being renewed, then non-freshman students from a Mason County, Michigan high school may be considered as applicants as long as they have maintained a 3.0 GPA.

**Jennie Master Endowed Scholarship in Math Education**

Established in 2016 by the estate of Jennie E. Master '43, '52. Income from the endowment will support a renewable award for a full-time student enrolled in the College of Science and Engineering, Department of Mathematics. Recipient will have an interest in pursuing a career in mathematics education, with a cumulative minimum GPA of 3.0.

**Masterson-Teik Family Endowed Scholarship**

Established in 2022 by Dr. Thomas J. Masterson, Jr. and Mrs. Nancy C. Masterson in memory of their parents. Award will be for a junior or senior enrolled in a clinical program with The Herbert H. and Grace A. Dow College of Health Professions. Recipient will have a cumulative minimum GPA of 3.5 or higher and is renewable for one year. Preference will be given to first-generation students.

**Emer A. Mathias Endowed Scholarship**

Established in 2010 by a planned gift from the late Emer A. Mathias (Class of 1939). The renewable award will be for a student enrolled in the teacher education program in the College of Education and Human Services with a minimum 3.0 GPA.

**Paul Carl Mathis II Scholarship**

Established in 1987 in memory of Paul C. Mathis, professor of economics at CMU from 1962 to 1985, for an outstanding student in economics.

**Gilbert A. Maxwell Endowed Award in Art**

Established in 2010 by the estate of Gilbert A. Maxwell (Class of 1958, 1964) in memory of his parents, George (1938) and Irene Maxwell (1931), who met at Central Michigan State College in 1930. Income from this endowment will support an award for a full-time junior art major to support the tuition and housing expenses associated with a national or international art study experience.

**Keith L. Maxwell Scholarship**

Established in 1984 through the estate of Ellen Mercer Clark Maxwell in memory of her husband, Dr. Keith L. Maxwell, for students in the Department of Communication Sciences and Disorders.

**Max A. May Endowed Scholarship in Chemistry**

Established in 2010 by Norma J. May, in memory of her husband Max A. May (Class of 1970). Income from the endowment will support a renewable award for a junior or senior enrolled in the College of Science and Engineering and the Department of Chemistry and Biochemistry with a minimum 2.5 GPA, with preference given to a student coming from a rural farming community.

**Jean Mayhew Interdisciplinary Scholarship in Theatre & Dance**

Professor Mayhew, a faculty member from 1952 to 1981, established the award for undergraduates with junior or senior status, who are Michigan residents. Student(s) will demonstrate financial need, majoring in Theatre or Dance with a minimum cumulative grade point average of 3.0 or higher.

**Robert E. McCabe Music Scholarship in Memory of Robert Hohner**

Established in 2001 by Robert E. McCabe in memory of Robert Hohner, former CMU percussion instructor. Proceeds from the endowment will be used to establish a scholarship for an approved and active music major whose primary instrument is percussion, with a minimum 3.5 GPA, and demonstrated financial need by university standards.

**Robert E. McCabe Scholarship**

Established in 1998 by Robert McCabe (Class of 1946) for undergraduate or graduate students with a minimum 3.2 GPA and financial need. First preference will be given to students pursuing a degree in journalism. If no qualified candidate is identified, then the scholarship shall be awarded to a student pursuing a degree in liberal arts.

**Diane McCann Memorial Endowed Scholarship**

Established in 2002 by Joseph McCann (Class of 1959) in memory of his wife Diane McCann. Proceeds from the endowment will be used to establish a renewable scholarship for a sophomore level student or higher with a GPA of 2.8 or higher and who is a member of the Central Michigan University Varsity Baseball Team.

**Walter W. McCarley, Ph.D., Scholarship**

Established in 1986 to provide a scholarship for a student pursuing a teaching career.

**Mark McDonald O.I.T. Endowed Award**

Established in 2019 through the collective giving of OIT staff, this award is available to undergraduate and graduate students university-wide, regardless of major or field of study. The recipient(s) will maintain a minimum cumulative GPA of 3.0 or higher. The recipient must have been employed by the Office of Information Technology for at least one full semester and be employed by the Office of Information Technology at the time upon which the award is made. The scholarship is not renewable following its initial award.

**McDonald Future Science Teachers Scholarship**

Established in 2006 by Jim and Jamie McDonald. Income from the endowment will support a renewable scholarship for a sophomore, junior, or senior elementary education, pre-service teacher with a major or minor in science, biology, physics, or any of the hard sciences with a minimum 3.5 GPA.

**Gene and Melissa McKay Endowed Scholarship**

Established in 2004 by Gene (Class of 1982) and Melissa McKay. Gene is a current CMU Development Board member. Earnings from this endowment will be used to support a renewable scholarship for entering freshmen or transfer students with demonstrated financial need, pursuing a degree in the College of Business Administration and who have a GPA of 3.0 or higher.

**Edward E. McKenna Academic Excellence Award**

Edward E. McKenna served as a faculty member in the Department of Sociology, Anthropology, and Social Work from 1969 to 1992. The scholarship is to be awarded annually to a student or students whose research demonstrates exemplary achievement in sociological research methods. Competition for the scholarship will be held by the sociology department each spring with an application deadline of March 15.

**Floyd H. McKibben and Olive Allen McKibben Scholarships**

Mrs. McKibben bequeathed two scholarship funds in memory of her husband and herself for a worthy student. Both Mr. and Mrs. McKibben graduated from CMU and were well-known educators in Gratiot County.

**Jane McNamara Physical Education Award**

Established in 2008 by the estate of Jane McNamara, emerita faculty. Income from this endowment will be used to support a renewable scholarship for a student admitted to the physical education and sport program in The Herbert H. and Grace A. Dow College of Health Professions. Recipient must have a minimum GPA of 3.0.

**Bernard N. Meltzer Scholarship**

Established in 1988 by family and friends of Bernard N. Meltzer. Dr. Meltzer was a professor in CMU's department of Sociology, Anthropology, and Social Work in the College of Liberal Arts and Social Sciences, who retired in 1987. The award is for undergraduates with sophomore or higher status, majoring in Sociology and/or any programs within Sociology (general sociology, youth studies, social criminal justice, etc.) with a minimum cumulative GPA of 3.5 or higher.

**Mary Jane Merrill Scholarship**

Established in 1969 by parents Elwyn E. Merrill, CMU Class of 1944 and Grace Bonnell Merrill, CMU Class of 1941, as a tribute to their daughter and her grandfather, Ernest J. Merrill, Ph.D. Mary Jane was a CMU junior majoring in education who lost her life in a car accident October 5. Ernest J. Merrill, Ph.D., was a CMU faculty member from 1921 to 1953 and was head of Chemistry and Physics when he retired. Spendable investment income will be awarded to one second semester CMU full-time junior or senior chemistry major who has earned a 3.00 or higher grade point average and has met other eligibility criteria. Additional scholarships may be distributed once the spendable income exceeds 50% of tuition for a full-time student.

Recipients must be Michigan residents with preference given to students who are residents of Midland or Isabella counties.

**The Honorable Fred M. and Lynne M. Mester Family Endowment**

Established in 2009 by friends and family of the Honorable Fred M. Mester (Class of 1959, 1995) and Lynne Mester (1959) to recognize their service and dedication as respected friends, colleagues, and mentors to the College of Humanities and Social and Behavioral Sciences. Income from this endowment will support a renewable award for students who plan a major or minor in Political Science; Sociology, Anthropology, and Social Work; or English Language and Literature. The recipient will have a minimum GPA of 3.0 and should be oriented to the service of others with a history of active involvement in community service with leadership qualities, holding leadership positions, be it on the local or state level.

**Metro Detroit Alumni Chapter Award**

Established in 2005 by alumni of the Metro Detroit area. Income from the endowment will support a renewable scholarship for two students each year. The first scholarship will be awarded based upon need and the second scholarship will be awarded to a student-athlete. Each scholarship recipient must be at least a sophomore; have a minimum GPA of 2.5; and be from Livingston, Macomb, Monroe, Oakland, Washtenaw, or Wayne County.

**Michigan 22nd and Beyond ROTC Endowment Fund**

Established in 2008 by Army ROTC alumni and friends in honor of the dedication and support of the Michigan 22nd and retired secretary, Beverly Denise Gallagher. Income from this endowment will support a renewable scholarship for a student enrolled in the Department of Military Science Army ROTC with a minimum GPA of 2.5. Endowment may also be used for student program activities needs as deemed appropriate by the chair of the Military Science Department.

**Michigan Community College Academic Achievement Award**

Established in 2010 for Global Campus undergraduate students who have earned an associate's degree with a minimum cumulative GPA of 3.0 from a Higher Learning Commission accredited community college located in Michigan. Applicants must be geographically bound for professional or personal reasons and reside in a Michigan county that has no public residential four-year university or reside more than 30 miles from a four-year public residential university in Michigan.

**Mid Michigan Human Resources Association Endowed Scholarship**

Established in 2017 by members of the Mid Michigan Human Resources Association. Income from the endowment will support a renewable award for a full-time junior or senior pursuing a major in Human Resources Management in the College of Business Administration. Candidate must be in good academic standing.

**Miles Actuarial Award**

Established in 2007 by CMU professor Dr. Thomas Miles and his spouse Cindy. Income from the endowment will support a renewable award to Actuarial Science majors who have successful performance in courses preparing for the actuarial exam, to assist in the expense of taking the actuarial exam. Preference will be given to active members of Gamma Iota Sigma.

**Drayton and Minnie Miley Scholarship**

Established in 1981 through the estate of Inez M. Vetter in honor of Drayton and Minnie Miley for a female student majoring in teacher education and professional development.

**Evelyn and William Miller Honorary Scholarship**

Established in 1990 by William and Delores Miller in honor of his parents, Evelyn and William Miller (Class of 1939), for a student with preference given to graduates from Glen Lake High School or Kingston High School, MI.

**William and Delores Miller Endowed Award**

Established in 2005 by Dr. William (Class of 1972) and Delores Miller. Dr. and Mrs. Miller are CMU retirees, Dr. Miller from the math department and Mrs. Miller from health services. Income from the endowment will support a renewable award for a junior with a math major who can demonstrate financial need. Preference will be given to graduates from Michigan high schools.

**Kimberly Sue Mills Scholarship**

Established in 1988 by parents and friends in memory of Kimberly Sue Mills for a junior or senior student majoring in biology.

**Minelli Family Endowed Scholarship**

Established in 2005 by Dr. Ernest L. Minelli and Dr. Mark Minelli '75. Income from the endowment will support a renewable award for a student with a signed major or minor in the School of Health Sciences who has a minimum GPA of 3.0. Preference will be given to students studying or interested in any of the public health fields.

**Information Systems (IS) Student Award**

Established in 1999 by the Department of Business Information Systems for an IS major with a 3.0 GPA overall and in IS courses. Preference will be given to members of The Association for Information Technology Professionals (AITP).

**Doris A. Mitchell Endowed Award**

Established in 2010 by Carol L. Pilon (Class of 1972, 1982) and Dawn M. Pilon (1988) in honor of Doris A. Mitchell (1942). Income from the endowment will support a renewable award for an incoming freshman from Clare High School who plans to pursue a teaching degree in the College of Education and Human Services or a degree in The Herbert H. and Grace A. Dow College of Health Professions and has a GPA of at least 3.3 or higher. In the event there are no qualified applicants from Clare High School, qualified applicants from high schools in the contiguous counties of Clare County may be considered.

**Francis and Mary Lois Molson English Education Scholarship**

Established in 1997 with a criteria change in 2004, this renewable scholarship was established by Francis and Mary Lois Molson. The recipient will be an undergraduate student with an English major or minor, completing the secondary education certification and who has a minimum GPA of 3.25.

**Dorothy G. and Robert E. Monica Endowed Scholarship Fund**

Established in 2003 by Dorothy and Robert Monica, Friends of CMU. Proceeds from this endowment will be used to support a renewable scholarship for a student enrolled in the College of Business majoring in Accounting or Information Systems with a GPA of 3.0 or higher. Recipient will be a resident of Michigan and demonstrate financial need.

**Moon Family Scholarship**

Established in 1998 in honor of the Martin Moon family of Brunswick, Michigan, for graduates of Freemont High School. This scholarship is awarded annually with preference given to incoming freshmen in need of financial assistance and pursuing a degree in teacher education with a minimum 3.0 GPA.



**Moon/Gempel Burton-Bendle High School Scholarship**

Established in 2005 by James H. Moon (Class of 1941) in honor of his good friend and retired superintendent of schools in Bendle, Kenneth Gempel. Income from the endowment will support a scholarship for a freshman from Burton-Bendle High School with a minimum 3.0 GPA. Preference will be given to those who can demonstrate financial need.

**Wayne and Ethel Moore Endowed Scholarship**

Established in 2007 in honor of the late Dr. Wayne E. Moore, geology professor, and his spouse Ethel Moore. Income from the endowment will support an incoming freshman who declares an intent to major in geology. Award is renewable for a second year if the student maintains good academic standing and remains committed to geology major with a minimum GPA of 3.0. Students who enhance diversity are especially encouraged to apply.

**Wayne E. and Ethel P. Moore Field Trip Award**

Established in 2000 for junior or senior geology majors to support travel, lodging and other expenses for class and department sponsored field trips.

**Wilbur Moore Prize**

Established in 1989 in memory of Wilbur E. Moore, founder of what are now known as the Summer Remedial Clinics and the university's first vice president for academic affairs, for a junior who is enrolled as a major in one of the three departments formerly comprising the Department of Speech and Drama: Department of Theatre and Dance, Department of Communication Sciences and Disorders and School of Communication, Journalism, and Media.

**Marilyn and Jerry Morey Endowed Scholarship**

Established in 2018 by Marilyn and Jerry Morey '69. Income will support a renewable award for a student enrolled in the College of Business Administration. Recipient will be a graduate from a Michigan-based high school demonstrating academic achievement by having earned a minimum GPA of 2.8.

**Morris Family CMU Endowed Scholarship**

Established in 2009 by Laurie and Michael J. Morris '80, '93. Income from the endowment will equally support three awards for students enrolled in the College of Business Administration, College of the Arts and Media and for students enrolled in a masters program with CMU Online programs. On Campus students must have successfully maintained a 3.2 GPA. Documentation will need to be provided to support a GPA of 3.2 was achieved in high school if an incoming freshman is an applicant. The recipient of the Global Campus scholarship must be pursuing a master's degree and must have received an undergraduate degree from CMU. It is the intent of the Morris Family that this scholarship not apply solely to the financially disadvantaged as defined by Federal and/or State of Michigan guidelines.

**Murthy "SN Family" Endowed Award in Computer Science**

Established in 2021 by Dr. S. N. Jarayam Murthy, computer science professor at CMU, and his spouse, Maithreyi Murthy. Income from the endowment will support an award for an undergraduate student enrolled in computer science demonstrating financial need with a minimum cumulative GPA of 3.5. Funds will be used for travel and expenses to conferences and/or educational expenses related to cost of attendance.

**Robert and Lura Myers Scholarship**

Established in 1997 by Robert and Lura Myers of Lapeer, Michigan for undergraduate or graduate students with demonstrated financial need as determined by the Office of Scholarship and Financial Aid. Preference will be given to students from Lapeer County.

**Detective John S. Nagy, Sr. and Mrs. Dale L. Nagy Scholarship**

Established in 2016 by Mrs. John Nagy and Drs. Robert and Dale-Elizabeth Pehrsson, in memory of Detective John S. Nagy, Sr., who was actively engaged in life-long learning, especially in nature and natural history. Income from the endowment will support a renewable award for a full-time student enrolled in the College of Education and Human Services, Department of Recreation, Parks and Leisure Services Administration with a minimum GPA of 3.0. Preference will be given to a first-generation college student. The scholarship is intended for students who want to serve and make a better society by engaging in professional work that promotes the wise use of our natural resources and educates our youth about natural environments. The intent is geared toward young professionals who desire to help our citizens enjoy a lifetime of activity, balance, sustainability, and productivity. Sophomores, juniors, and seniors are eligible if they have attained at least a 3.0 GPA in their first year at CMU and presently are in good standing.

**Dr. Nina Nash-Robertson Memorial Scholarship**

Established in 2018 by John and Jennifer Robertson, colleagues and friends in memory of Nina Nash-Robertson. Professor Nina Nash-Robertson served as the Director of Choral Activities at Central Michigan University from 1982 to 2017. As a talented and accomplished musician and an inspiring teacher and mentor, she touched the lives of thousands both at CMU and around the world. Scholarship will be awarded to a student who best exemplifies her enthusiasm and dedication to excellence in choral conducting and performance, and who demonstrates a record of distinguished musical and academic achievement as well as significant promise as a choral educator. Applicant will be a graduate student pursuing a choral conducting career in the Master of Music: Conducting or Music Education concentrations, or an undergraduate student with a signed Bachelor of Music Education: Choral Option major and have attained music candidacy. Undergraduate applicants must have earned an overall GPA of at least 3.0 and have at least one semester of experience as a registered student in the CMU Concert Choir and/or Chamber Singers. Applicants must provide an up-to-date CV; two letters of recommendation attesting to achievement and promise as a musician and an educator; and an essay [no more than 300 words] in which they describe their achievements as a choral performer and choral-education student and their aspirations as a choral educator.

**Lenora Marie Starr Nelson Scholarship**

Established in 1985 by Kenneth L. Nelson in memory of his wife and CMU alumna, Lenora, who devoted her life to the field of education teaching both general and special education in many different areas of the country.

**Ron L. Nelson Memorial Award**

Established in 2012 by Brenda Nelson, in memory of Ron L. Nelson, former Physician Assistant faculty at Central Michigan University. Income from this endowment will support an award for a full-time first year Physician Assistant student in The Herbert H. and Grace A. Dow College of Health Professions who has a minimum GPA of 3.5. Preference will be given to a student from a rural or underserved area, demonstrating previous community involvement and leadership skills along with proven financial need.

**New Beginnings Award**

Established in 2006 by alumni and friends of Central Michigan University. Income from the endowment will be used to support a renewable award for a senior who is working either on or off campus while attending CMU. A minimum 3.0 GPA must be maintained and financial need must be demonstrated.

**Ronald and Luellen Newmann Award**

Established in 2008 by Ronald and Luellen Newmann (Class of 1992). Income from this endowment will support a renewable award for a full-time student demonstrating financial need and from the Northern part of the Lower Peninsula.

**Linda Nichols Scholarship**

Established in 1985 by family and friends as a memorial to Linda (High) Nichols, CMU alumna and dedicated teacher at Bullock Creek High School in Midland County, for a freshman student residing in the Bullock Creek School District or Midland County. Recipient selection is made by a committee through the guidance department at Bullock Creek High School, 1420 Badour Road, Midland, MI.

**Suzanne Nichols Endowed Scholarship in Journalism**

Established in 2009 by Margaret A. (Yatooma) Bogle (Class of 1979) in honor of Suzanne Nichols (1957), emeritus journalism professor. Income from the endowment will support a renewable award for freshman or higher journalism major with a minimum 3.0 GPA. Recipient must have previously worked on a high school sponsored publication or broadcast.

**Walter P. Nickell Scholarship**

Converted in 1995 from a loan fund established in 1973 to commemorate Walter P. Nickell, noted Michigan naturalist, ornithologist and teacher who was awarded an honorary CMU Doctorate of Law degree in 1964. Dr. Nickell was affectionately known as the "Birdman of Cranbrook" and served as a faculty member at the Cranbrook Institute of Science for 33 years. Annual spendable investment income will be awarded to a CMU student pursuing a career in museum natural history. Application may be made through the Center for Cultural and Natural History.

**Patricia A. Nixon Scholarship**

Established in 1986 in memory of Patricia A. Nixon, former Department of Music faculty member, for a music major.

**Colonel William B. Nolde Scholarship**

Established as a loan fund in 1973 and converted to an endowment in 1990 for a ROTC cadet. The fund honors Colonel Nolde's devotion to God, country and family. Colonel Nolde was the last combat casualty of the Vietnam War. He was a graduate and former assistant professor of military science at CMU. Colonel Nolde's life was characterized by a dedication to peace and rebuilding, with the hope that all mankind would try to understand one another.

**O'Boyle Endowed Scholarship**

Established in 2007 by Jodi Brookins-Fisher '89, PhD and Irene O'Boyle '88, '91, PhD, both professors in The Herbert H. and Grace A. Dow College of Health Professions, School of Health Sciences. Income from the endowment will support a renewable award for a junior or senior with a declared major in Public Health Education and Health Promotion or School Health Education and has a minimum GPA of 3.0.



**Dr. Barbara Leiting-O'Connell Family Endowed Scholarship**

Established in 2007 by Dr. John F. O'Connell (Class of 1983) in memory of Dr. Barbara Leiting-O'Connell. Income from the endowment will support a renewable award for a junior or senior with a minimum GPA of 3.25. First preference will be given to students majoring in chemistry, then students majoring in physics or math. Preference will also be given to students desiring to attend graduate school.

**Michael F. and Mary F. O'Donnell Endowed Scholarship in Accounting**

Established in 2006 by Michael F. (Class of 1970) and Mary F. O'Donnell. Mike is a current CMU Development Board member. Income from the endowment will support a renewable scholarship for a student majoring in accounting. The student must be a junior or senior, have completed a minimum of 60 credit hours, and have a minimum GPA of 3.0. Preference will be given to students who can demonstrate financial need.

**Thomas C. and Sara C. Ogg Endowed Scholarship**

Established in 2018 by Thomas C. '70 and Sara C. Ogg. Income will support a renewable award for a junior or senior enrolled in the College of Business Administration. Recipient will demonstrate financial need and have a cumulative minimum GPA of 2.8. Preference will be given to applicants from Kent County, Michigan.

**Dr. Patrick Okonkwo Outstanding Marketing Student Leader Award**

Established in 2016 by Faculty and Friends in honor of Dr. Patrick Okonkwo. Dr. Okonkwo is a retired faculty of Marketing and Hospitality Services Administration. Income from the endowment will support an award for a student enrolled in the College of Business Administration, Department of Marketing, Hospitality, and Logistics academic program with a cumulative minimum GPA of 3.0. Student must be an active member in the American Marketing Association (AMA) and a junior or first semester senior with less than 100 credit hours completed toward their BSBA. Award will be based on student's academic performance, citizenship, service activities, and potential for becoming a distinguished leader in their profession. Preference will be given to applicants who either have an internship abroad or study abroad as part of their record. A written essay should focus on why the student is interested in a career in marketing and how their performance both in and out of the classroom demonstrates dedication to marketing and exemplifies leadership and service.

**C. W. Olmstead Award in Geography**

Established in 1992 by Clarence W. Olmstead (Class of 1937). Income from the endowment will support a renewable award for a sophomore or higher with a signed major in geography. Recipient must have completed or be currently enrolled in GEO 105 or its equivalent (GEO 120, GEO 121, and GEO 203), and also completed three additional courses towards the major at or above the 300 level. Student must have a minimum GPA of 3.5 in their major and a minimum overall GPA 3.5. Recipient must submit an application and cover letter as requested by the Department of Geography.

**Tom Olson Scholarship Fund**

Established in 1986 by friends, including Thomas J. Olson, (Class of 1958, 1968) in honor of William F. Brown, former Mt. Pleasant resident. Income from the endowment will support a graduating Mt. Pleasant High School or Sacred Heart Academy senior who will be a freshman at CMU.

**Oppenheimer-Mancuso (Lazorshak) Award**

Established in 2000 by the Edith M. Lemieux, '65 estate for a senior Philosophy major who submits an outstanding essay on the subject of the necessity for teaching ethics and/or character development in the elementary grades.

**Opperman Public Relations Internship Endowment**

Established in 2010 by Trustee Sarah Rowley Opperman (Class of 1981) and The Honorable Daniel S. Opperman in honor of Dorothy and Eric Rowley. Income from the endowment will support an award for a public relations student participating in unpaid or underpaid public relations internships. Recipient will be enrolled in Journalism and/or Integrative Public Relations and have a GPA of at least 3.0. The internship must either be a graduation requirement for the recipient or the recipient must be returning to academic studies at CMU subsequent to completion of the internship.

**Kathleen M. and Lawrence J. Oswald Endowed Scholarship**

Established in 2005 by Kathleen M. ('79) and Lawrence J. Oswald for Global Campus students residing in Southeast Michigan. Applicants must have successfully completed a minimum of twelve (12) credit hours (undergraduate) or nine (9) credit hours (graduate) and have earned a minimum GPA of 3.0. Preference will be given to single parents.

**Al Painter Outstanding Newcomer Award**

Established in 2015 by the School of Broadcast & Cinematic Arts Constituent Alumni Chapter in memory of Al Painter '76. Al was a student with blindness from Clawson, Michigan who was the first program director of WMHW-FM when the Broadcast & Cinematic Arts (BCA) student station went on the air in 1972 as a 10-watt facility. He was a tireless worker at the station and provided excellent and well-respected training for many of his student colleagues. Al had a long career in radio before passing away following a debilitating illness. Income from the endowment will support a non-renewable award for a freshman or transfer student for outstanding performance in both the classroom and a Media Arts co-curricular unit. The recipient must have completed their first year at CMU (freshman or transfer).

**Parker-Marshall Scholarship**

Established in 2016 by William F. Marshall, Sr. and Phyllis Ann (Parker) Marshall '70, '79. Income from the endowment will support a renewable award for a junior or senior from Emmet or Cheboygan County that demonstrates financial need and is enrolled in the Department of Teacher Education and Professional Development with first preference to a student(s) majoring in Elementary Education with a minimum GPA of 3.25. In the event that there are no qualified applicants from Emmet or Cheboygan County, other qualified applicants from other counties who are majoring in Elementary Education may be considered.

**Wallace Parker Scholarship**

Converted in 1995 from a loan fund established in 1963 to commemorate Wallace C. Parker who served CMU as a coach and director of athletics during the early years of the university's development and for his continued interest throughout his lifetime. Annual spendable investment income will be awarded to a CMU health, physical education and recreation student. Application may be made through the Department of Physical Education and Sport.

**Parr Student Professional Development Fund**

Established in 2021 by Donna Parr '91 to carry out the legacy of her late husband, Dr. Richard Parr, emeritus faculty in the School of Health Sciences in The Herbert H. and Grace A. Dow College of Health Professions. The Donor wishes to provide support for motivated, hard-working students who will benefit from participating in professional development. The non-renewable award should provide financial support for costs associated with professional development, such as, attendance at professional conferences when presenting, professional organization annual membership dues, professional journal subscription costs, or writing certification test costs. Recipient will be a sophomore or higher undergraduate student or a graduate student in the current School of Health Sciences in The Herbert H. and Grace A. Dow College of Health Professions majoring in Exercise Science or enrolled in the M.S. in Exercise Physiology Program. Preference will be given to students who have financial need. Financial need should outweigh GPA.

**Parr Internship Fund**

Established in 2021 by Donna Parr '91 to carry out the legacy of her late husband, Dr. Richard Parr, emeritus faculty in the School of Health Sciences in The Herbert H. and Grace A. Dow College of Health Professions. The Donor wishes to provide support for motivated, hard-working students who may not have had the opportunity to be highly involved in extra-curricular activities or who are in need of financial support to enable them to complete the best possible internship experience for their professional goals. Recipient will be an undergraduate or graduate student in the current School of Health Sciences in The Herbert H. and Grace A. Dow College of Health Professions and be majoring in Exercise Science (Clinical Exercise Science or Health Fitness) or will be enrolled in the M.S. in Exercise Physiology Program. Recipients will have a cumulative minimum GPA of 2.5 and must have their internship application approved by the faculty Internship Coordinator in order to be eligible for this award. A recipient of this fund is not eligible to receive support for more than one academic year and must demonstrate financial need. Financial need should outweigh GPA.

**Col. Harold L. Patrick Endowed Scholarship**

Established in 2007 by Col. Harold L. Patrick '57. Income from the endowment will support a renewable scholarship for a full time undergraduate student with a cumulative minimum GPA of at least 3.0. Preference for a student from Mancelona High School but not a requirement.

**Jacques E. and Helen M. Baer Perry Scholarship**

Established in 1988 by Jacques E. Perry (Class of 1949) and Helen M. Baer Perry (1950), for a junior or senior majoring in a World Language who has a 3.0 or higher GPA.

**Nancy (Ruhlig) Persinger Special Education Scholarship**

Established in 2017 by Shirley Witzke Krause '67 to honor her friend, Nancy (Ruhlig) Persinger. Income from the endowment will support a renewable award for a student enrolled in the College of Education and Human Services, admitted to the Special Education program with a cumulative minimum GPA of 3.25.

**Robert & Marily Peterson Scholarship in Memory of Patricia M. Mehrkens**

Established in 2022 by Robert '76 & Marily Peterson in memory of Marily's sister Patricia M. Mehrkens. It is the intent of the donors to support a renewable undergraduate scholarship for at least one student annually. Recipient(s) of the award will be an undergraduate student employed by the Charles V. Park Library or Clarke Historical Library. Student will also demonstrate financial need and will have completed one full semester of employment or be employed by either library at the time the award is given. Preference will be given to Elementary Education students.

**Dr. Michael J. Petrick Journalism Scholarship**

Established in 2013 from the estate of Dr. Michael J. Petrick, previous CMU Journalism chairperson and professor. Income from the endowment will be used to assist an undergraduate journalism news/editorial student with a minimum cumulative GPA of 3.0 also demonstrating financial need.

**Phi Chi Theta Endowed Award**

Established in 2012 by Linda Wicander '81, Director of Business Student Services, and friends and members of Phi Chi Theta. Income from the endowment will support an award for a junior or senior with a minimum GPA of 2.5. Recipient must also be enrolled in the College of Business Administration and a member of Phi Chi Theta.

**Phi Kappa Tau Scholarship**

Established in 1994 by CMU Phi Kappa Tau alumni for sophomore, junior or senior Phi Kappa Tau members who have a minimum GPA of 2.5. Applications can be made by March 1 each year through Carlin Alumni House, Central Michigan University, Mt. Pleasant, MI 48859.

**Reed Phillips Athletic Training Award**

Established in 2015 by Nick and Toni Phillips '80 and friends in memory of Reed Phillips '12. Income from this endowment will support a renewable award for a full-time student majoring in Athletic Training within the Herbert H. and Grace A. Dow College of Health Professions, who also has a cumulative minimum GPA of 3.25. Preference will be given to those students who demonstrate a passion for sports, athletic training, and those who show compassion towards people.

**Joseph K. Piasecki Academic Excellence Scholarship**

Established in 1994 by family and friends in memory of Joseph Piasecki (Class of 1968), who died tragically while on the job as a superintendent of the Chelsea School District. The award will be given each semester to an undergraduate Sigma Tau Gamma fraternity member achieving the highest GPA. Piasecki was a member of Sigma Tau Gamma.

**Dr. Leonard E. and Louise A. Plachta Charter Public School Scholarship**

Established in 2009 by Louise A. Plachta (Class of 1992) in honor of Dr. Leonard E. Plachta who served as president of Central Michigan University from 1992 to 2000. Dr. Plachta focused on developing effective academic programs, through improved student services and efficient management. Dr. Plachta was a professor of Accounting and then Dean of the College of Business Administration before being appointed president. Income from the endowment will support a renewable award for a graduate from a CMU-sponsored charter public school in Detroit, Michigan. Student must have a GPA of at least 3.0.

**Dr. Leonard E. Plachta Accounting Scholarship**

Established in 2012 by Louise A. (Mrs. Leonard E.) Plachta '92 in memory of Dr. Leonard E. Plachta, professor of accounting, Dean of the College of Business Administration, and President of Central Michigan University from 1992 – 2000. Income from the endowment will support a scholarship for a student enrolled in the College of Business Administration. The recipient shall be a junior, a senior, or a master's degree candidate majoring in the study of accounting. The recipient must have a minimum GPA of 3.0 overall and a GPA of 3.2 in accounting courses. Preference will be given to candidates who aspire to receive a Ph.D. in accounting and plan to teach at the collegiate level.

**Louise A. Plachta Endowed Award**

Established in 2005 by Dr. Leonard E. and Louise A. Plachta (Class of 1992). Income from the endowment will support a scholarship for entering freshman majoring in music with a minimum GPA of 3.0 and a successful audition. The award is renewable at the discretion of the School of Music.

**Ethel M. Polhemus Scholarship**

Established in 1987 through the estate of Ethel M. Polhemus for a student from Greenville High School, MI.

**Pontiac Senior High School Scholarship**

Earnings provide a scholarship which approximate regular fees for a Pontiac Senior High School student to attend CMU for one to four years.

**Dee Pommerenk Women's Basketball Team Player Award**

Established in 2002 by Dee Pommerenk (Class of 1963), former CMU women's basketball player. Proceeds from the endowment will be used to support the women's basketball annual budget through the Chippewa Club Athletic Endowment. An annual award will be given to the individual who exemplifies positive attitude, teamwork, and a willingness to contribute to the maximum effort regardless of ability, individual statistics, or class year.

**Dr. Glen D. Porterfield Scholarship**

Converted in 1988 from the loan fund established in 1967 by family and friends in memory of Glen D. Porterfield, a 1919 graduate and dedicated Houghton Lake, MI, physician. The scholarship is available to a junior or senior based on financial need and academic achievement.

**Helen Vowles Porterfield Scholarship**

Established in 1984 to provide tuition and fees by family and friends in memory of Helen Vowles Porterfield (Mrs. Glen D. Porterfield), former Mt. Pleasant native who received her CMU Life Certificate in 1919 and B.A. and M.A. degrees from the University of Michigan. During the 1920's she taught French and Latin at Mt. Pleasant High School and at Central during summer sessions when Anna M. Barnard was foreign language department chairperson. From 1932 to 1943 she served as social director of Ronan Hall, later moving to Sloan Hall. Helen served as assistant dean of women under Bertha Ronan and taught personnel classes to freshmen. For many years a counselor and friend of students, she never lost her interest in young people.

**Roderick A. Powers Scholarship**

Established in 1986 by Julia E. Powers in memory of her husband Rod who taught government and economics at Hart High School, MI for 19 years. His love of education will forever be a legacy to his former students. This legacy will also continue in the form of a scholarship to Rod's alma mater, CMU.

**Scott L. Pranger Central Michigan University Scholarship**

Established in 2017 by Scott L. Pranger '83. Scholarship will provide a full cost of attendance award for an entering freshman enrolled full-time in any major or field of study at Central Michigan University. The award is renewable for three additional years. Full cost of attendance is defined by the CMU Office of Scholarships and Financial Aid. The amount of the award may be reduced by an amount equivalent to any other CMU-provided financial awards. Candidate will be a graduate of Shelby High School in Oceana County, or Spring Lake High School in Ottawa County, and will have a minimum high school GPA of 3.5. Preference will be given to students that demonstrate financial need when all other qualifications are equal. Applicants receiving either a partial or full athletic scholarship from CMU are ineligible. Student-athletes that do not receive athletic scholarship support remain eligible for this award.

**Prasad Financial Management Association Endowed Scholarship**

Established in 2010 by Rose Prasad, CMU Finance and Law professor. Income from the endowment will support a renewable award for a sophomore or junior enrolled in the College of Business Administration, majoring in one of the Finance and Law programs with a minimum GPA of 3.0.

**Pre-Medicine and Osteopathic Society Endowed Award**

Established in 2011 by the Pre-Medicine and Osteopathic Society. Income from the endowment will support an award for a junior with a minimum GPA of 3.25, who is an active member of the Pre-Medicine and Osteopathic Society who has passed initiation and been a club member for three semesters.

**Karoline J. Prevette Scholarship Fund**

Established in 2022 by Robert C. Prevette, in memory of his late wife and former teacher, Karoline (Candy) J. Prevette. Candy graduated from Central Michigan University in 1971 and served as an elementary school teacher, committed to working with gifted and talented children. Income from the endowment will support a renewable scholarship for an undergraduate student enrolled in the Teacher Education program within the College of Education and Human Services. The recipient will demonstrate financial need and have a minimum cumulative GPA of 3.0.

**Robert C. Prevette and Teresa H. Powell-Prevette Endowed Scholarship**

Established in 2009 by Robert C. (Class of 1971) and Teresa H. Powell-Prevette. Income from this endowment will support a renewable award for a full-time student demonstrating financial need that is a single parent with a minimum GPA of 2.7. Bob, a graduate of the CBA, is president of Legacy Trust, a special purpose bank with offices in Grand Rapids and Holland, Michigan. Teresa teaches kindergarten and first grade at Holy Name of Jesus School in Grand Rapids. Bob and Teresa have actively supported CMU through participation on the Development Board and many campus events.

**Dr. George J. Jr. and Carol D. Quarderer Endowed Scholarship in memory of George J. Quarderer, Sr.**

Established in 2022 by George J. Quarderer, Jr. and Carol D. Quarderer '85, '93, to honor the memory of George J. Quarderer, Sr. '26, '31, '46. Income from the endowment will support a renewable scholarship for an undergraduate student enrolled in the Teacher Education program within the College of Education and Human Services. The award is intended to support aspiring educators, either in elementary or secondary education demonstrating financial need.

**G. William Quine Scholarship**

Established in 1982 by G. William Quine '57 for a Michigan resident student studying liberal arts. Recipient will be at least a sophomore and preference will be given to students whose GPA is under 3.0 without regard to financial need or academic standing. The scholarship is not renewable.

**Millard Quinlan Scholarship**

Established in 1999 in memory of Millard J. Quinlan, a teacher-principal in the Newberry school system, for a education major with preference extended to students from the Upper Peninsula in Chippewa, Luce or Mackinaw counties with a minimum GPA of 3.0.

**Lawrence D. Rahilly Scholarship**

Established in 1981 by family and friends in memory of Lawrence D. Rahilly, charter member of the CMU Board of Trustees, for a merit and need-based scholarship for a senior in business administration.

**Gilbert Rau Oratory Award**

Established in 1982 for three students chosen as the best speakers in the annual Gilbert Rau Oratory Contest.

**Department of Recreation, Parks and Leisure Services Administration Scholarship**

Established in 1988 by the Department of Recreation, Parks and Leisure Services Administration for their majors in the name of G. Patrick Doyle, Donald F. Lutz, Agnes Rainwater and the department.

**Mary Stilwell Redmond Elementary Education Scholarship**

Established in 2021, created by a donor to honor the life of deceased relative Mary Stilwell Redmond '84 (aka Mary Florence Redmond). Mary was an educator at Bishop Baraga School in Cheboygan for more than 30 years, a job in which she enjoyed and took great pride. Income from the endowment will support an award for a junior or senior student demonstrating financial need within the College of Education and Human Services majoring in Elementary Education. First preference will be given to a student from Cheboygan, Emmet, or Mackinaw counties. If no students from these counties are eligible, a student from another Michigan rural community will be selected.

(continued)

**Reed Family Endowed Scholarship**

Established in 1998 by the Reed Family, will be awarded to a junior or senior within the College of Business Administration with an overall GPA of 3.5 or higher. It will rotate between accounting and marketing majors.

**Michael R. Reno Scholarship for Academic Excellence**

Established in 2007 by Michael R. Reno (Class of 1973, 1980). Income from the endowment will support a renewable award for a resident of the state of Michigan who is a current student and will be attending Central Michigan University. Must also indicate a desire to major in an academic program with the College of Liberal Arts and Social Sciences. Preference will be given to students who have a record of academic excellence as demonstrated by a GPA of 3.5 or higher and/or a minimum composite ACT of 24. Please see the College of Liberal Arts and Social Sciences for further information.

**John W. and Marilyn D. Richards Art & Design Scholarship**

Established in 2017 by Paul '75 and Barbara Richards. Income from the endowment will support a renewable award for a junior or senior enrolled in the Department of Art & Design who has an interest in the Sculpture or Ceramics programs. Recipient will have a cumulative minimum GPA of 3.0 in Art with financial need.

**Paul W. and Barbara C. Richards Endowed Scholarship**

Established in 2006 by Paul (Class of 1975) and Barbara Richards. Paul currently serves on CMU's Development Board and is the owner of Superior Cadillac-GMC and Brighton Honda. Income from the endowment will support a renewable scholarship for a junior or senior business major with a minimum 2.8 GPA who can demonstrate financial need. Preference will be given to students from Livingston County. Second preference goes to students from Wayne, Oakland, Macomb or Washtenaw Counties.

**Norma and Howard Richardson Endowment for Undergraduate Student Travel**

Established in 2015 by Dr. Norma Richardson, CMU Assistant Professor of Foreign Languages and Dr. Michael Libbee, CMU Professor of Geography, in memory of the late Dr. Howard Richardson, Professor Emeritus. The endowment will support travel for students with majors or minors in geography or / social science with a geography concentration. Travel must be part of an educational program organized or approved by Central Michigan University and the Geography Department. Travel can include international travel, support for Geography Department groups to attend national meetings, and support for student teaching experiences outside of Michigan.

**Cleon C. Richtmeyer Scholarship**

Dr. Richtmeyer, former dean of the College of Arts and Sciences, former chairman of the Department of Mathematics and faculty member from 1924 to 1968, bequeathed a scholarship for students majoring in mathematics on the basis of merit. Recipients are selected by a committee in the Department of Mathematics.

**Greg & Antoinette Rickle Endowed Scholarship**

Established in 2010 by Greg (Class of 1973) and Antoinette (Nina) Rickle (1973). Income from the endowment will support an award for a student demonstrating financial need with a minimum 3.0 GPA. The award will alternate yearly between the Chemistry and Biochemistry Department and the Philosophy, Anthropology, and Religion Department. If no qualified recipient is available, the other department may award the scholarship for that year.

**William H. Rivard Trombone Scholarship**

Established in 1994 in honor of Professor Emeritus William H. Rivard by former students, colleagues, and friends to honor the lifetime of contributions Dr. Rivard bestowed on the University, the community, and the field of music education. The earnings will be divided into two awards and may be awarded to more than one recipient if the committee so chooses: The first award will be for a junior or senior who is currently a music major and has completed at least 45 credit hours, but no more than 100, prior to the semester of application. Students will be selected by a committee based on the following criteria: minimum GPA of 3.0 in all studies; minimum GPA of 3.25 within the field of music; contributions to CMU School of Music Ensembles; may be renewed. The second award will be for an incoming freshman or transfer student, to be selected by the trombone faculty and/or audition committee during the audition process for showing extraordinary musical promise. The award may be renewable for up to four years if the following criteria is met: full-time status as music major with emphasis in trombone; maintains GPA of 3.25 for all music classes; contributions to CMU School of Music Ensembles.

**Tim Roberts Country Radio Broadcasters Endowed Scholarship**

Established in 2006 by the Country Radio Broadcasters in honor of Tim Roberts (Class of 1982). Income from the endowment will be used to support a scholarship for a junior or senior in broadcast and cinematic Arts. The recipient will have an active past or planned present involvement at WMHW-FM and/or other BCA radio units with a minimum GPA of 2.75 overall and 3.0 in BCA courses.

**Joan H. Rogers Endowed Award**

Established in 2013 by Joan H. Rogers '69 MS. Income from the endowment will support a renewable award for a student pursuing a career in chemistry, which would also include teaching chemistry or a career in medicine or a health related field. Recipient must initially have a cumulative GPA of 3.0.

**Kenneth and Jane Rogers Endowed Scholarship**

Established in 2007 by Kenneth '96, '06 and Jane Rogers. Income from this endowment will support a renewable scholarship for a student enrolled in Global Campus or Global Campus Online Programs pursuing a bachelor of science degree with a minimum GPA of 2.5. Recipient will be a single parent or from a single parent family who is a resident of Southeast Michigan.

**Roh Scholarship**

Established in 2017 by Dr. Yae Sock Roh. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration, who is majoring in hospitality services administration. Student must have a cumulative minimum GPA of 3.0 in traditional courses, (excluding grades from internship, independent study and non-traditional courses). Preference will be given to those who demonstrate financial need, and is intended for a student who is a child of a single-parent household. The award may be used to assist the student with job-related expenses, such as a job search, travel to interview, or relocation for a new job. Scholarship awards will be awarded in the student's final semester at CMU.

**Joyce Rohlfs Scholarship**

Established by Mr. and Mrs. William E. Rohlfs and Glen Rohlfs in memory of their daughter and sister for junior or senior women who are residents of Midland, Tuscola or Saginaw counties in childhood and elementary education.

**Tracey Marie Rondy Memorial Endowed Scholarship**

Established in 2006 in memory of Tracey Marie Rondy by her parents Gary and Maureen (Class of 1984) Rondy, sister Tara Rondy (2000), family and friends. Income from the endowment will support a scholarship for a full time CMU student with a minimum 3.0 GPA who attended a public, private, or alternative education school in Mt. Pleasant, Shepherd, Beal City, Alma, Ashley, Breckenridge, Ithaca, or St. Louis. Preference will be given to students with a signed major in interior design and/or who worked on the vocational education house while attending the Mt. Pleasant High School Vocational/Technical Center.

**Helen Holz Rooney Endowed Award at CMU Libraries**

Established in 2013 by Robbi Kosinski '76 in memory of her mother, Helen Holz Rooney '49, who worked in CMU's library as a student and had many fond memories of working there. Income from the endowment will support an award for a student employed by the CMU Libraries for a minimum of 10 hours per week, with intent to continue employment at the CMU Libraries in the following academic year. Recipient will have a minimum cumulative GPA of 3.0 and be recommended by their current CMU Libraries' supervisor regarding their satisfactory employment. Applicants will be asked to compose an essay regarding the benefits of employment at the Libraries to their academic career, future professional career, and personal growth; as well as how the awarded funds will aid him/her financially.

**Dan and Bobbie Rose Scholarship**

Converted in 1995 from a loan fund established in 1973 by family, alumni and friends for Dan's many years of service to the university and community as a teacher, coach and athletic director. Annual spendable investment income will be awarded to a CMU physical education major. Application may be made through the Department of Physical Education and Sport.

**James and Ann Rosloniec Endowed Scholarship in Accounting**

Established in 2009 by James (Class of 1968) and Ann Rosloniec. Jim and Ann have actively supported CMU through participation in many campus activities and events including the Development Board and the President's Grand Rapids Advisory Board. Income from the endowment will support a renewable award for a junior or higher with a minimum GPA of 3.5, enrolled in the College of Business Administration, majoring in Accounting. Preference will be given to a transfer student from Kent, Muskegon, or Ottawa County who demonstrates financial need.

**Barbara A. Ross Endowed Scholarship**

Established in 2015 from the estate of Barbara A. Ross '59, '72. Income from the endowment will support a renewable scholarship for a student(s) who is a graduate of Arenac County High School with a preference for students enrolled in the College of Education and Human Services.

**Susan Rozman-Delia Memorial Scholarship**

Established in 2003 by broadcast and cinematic arts alumni and friends wishing to honor Sue Rozman-Delia (Class of 1982). Proceeds from the endowed award will be used to support a student majoring in broadcast and cinematic arts. The recipient must have a 3.0 overall GPA and complete a BCA-sponsored internship.



**Tara Jo Rueger Memorial Endowed Award**

Established in 2020 by Dr. Barbara Dixon, former CMU Professor of Music/Piano, in memory of Tara Jo Rueger '93, an outstanding student pianist. Tara graduated with honors, with a double major in music and math, and was inducted into the Mortar Board senior honor society. She went on to earn a Master of Music in piano performance, and subsequently taught music in the public schools until her untimely death in 1998. Income from this endowment will support a renewable scholarship for a full-time rising senior enrolled in a piano major who excels as a performance pianist and has demonstrated the potential and desire (as determined by the School of Music) to attend graduate school. If no rising senior is identified, the selected recipient may be a rising junior who demonstrates the same characteristics described above. The recipient will possess a broad range of musical interests and involvement in the field of music, as demonstrated by their assistance of other students, performances and more. The recipient will have a minimum cumulative grade point average of 3.0.

**Judge Bill and Eileen Rush Endowed Scholarship**

Established in 2006 by The Honorable Bill and Eileen Rush. Income from the endowment will support a renewable scholarship for a junior or senior student with a minimum GPA of 3.0 who is interested in pursuing a career related to law.

**Joanna M. Russ Memorial Undergraduate Research and Presentation Grant**

Established in 2004 by family and friends of Joanna M. Russ, the income from this endowment will be used to support a renewable research and presentation grant. Income may be used for expenses related to research and/or travel to present the results of the students research. Priority will be given to research related to CHARGE syndrome, but other research topics that qualify are autism, autism spectrum disorder and low incidence disabilities such as deafblindness. Recipient must possess a minimum 3.0 GPA and faculty sponsorship.

**Grace L. Ryan Scholarship**

The Grace L. Ryan Loan Fund established by alumni and friends of the university in honor of Miss Ryan's years of service was converted to an endowment in 1992 for physical education or business majors.

**Grace Larsen Sagendorf Scholarship**

Established in 1999 in memory of Grace Larsen Sagendorf (Class of 1939), former Greenville teacher, for an education major in good standing. Preference given to qualified students from the Greenville School System, then to students from Montcalm County, and then to any qualified student.

**Saadia Saif Human Environmental Studies Endowed Scholarship**

Established in 2016 by Dr. Saadia Saif, professor emeritus in the College of Education and Human Services, Department of Human Environmental Studies. Income from the endowment will support a renewable award for a junior or higher student enrolled in any major within the College of Education and Human Services Human Development and Family Studies programs. Recipient will demonstrate financial need and have a cumulative minimum GPA of 3.5 or higher.

**Lois A. and Richard C. Sandbrook Family Scholarship**

Established in 2013 by Lois A. Sandbrook '57, '72. Income from the endowment will support an award for a junior or senior enrolled in the College of Education and Human Services, Department of Human Development and Family Studies. Student will have demonstrated financial need and will have leadership or volunteer involvement with a minimum cumulative GPA of 3.0. First preference will be to a student majoring in Family Studies, second preference will be for a student majoring in Child Development. If no recipient fits the first and second preference, then the scholarship may be awarded to a student majoring in any program offered in the Human Development and Family Studies Department. Preference will also be given to a graduate from the Montabella, Shepherd or Midland school districts or a transfer student from Montcalm Community College.

**Jack Saunders Jazz Award**

Established in 2002 by retired CMU Marching Band Director and Professor of Horns, Jack Saunders (Class of 1960, 1965). Proceeds from the endowment will be used to support an award for an outstanding and dedicated junior or senior jazz musician with a positive attitude, who is enrolled in the College of the Arts and Media and the School of Music, and has been accepted for full music candidacy or full time graduate student status.

**Kenneth W. and Margaret Cuff Saunders Scholarship**

Established in 1989 by family and friends for a junior, senior or graduate student with a 3.5 or higher GPA. Preference is given to English, journalism or physics majors; the scholarship is renewable provided the 3.5 or higher GPA is maintained.

**Jeanette & Frank Schmalzried Endowed Scholarship**

Established in 2011 by Margo Donahue (Class of 1964) and Kay Schmalzried, in memory of their parents, Jeanette (1960) and Frank Schmalzried. Income from the endowment will support a renewable award for an incoming freshman or transfer student expressing interest in studying education and/or majoring in Teacher Education and Professional Development in the College of Education and Human Services who has earned a minimum GPA of 3.0 while in high school or upon transferring to CMU. The student may be from Pellston, Alanson, or the Mackinaw City, Michigan area. First preference will be given to students from Pellston, Michigan. If there are no recipients from these geographical areas that have an interest and/or are majoring in Teacher Education and Professional Development, then students from the three geographical areas mentioned above who are majoring in other areas of study may receive the award.

**Schuette Family College of Business Administration Scholarship**

Established in 2015 by Michael '05 and Kara Schuette '06, Douglas '74, '77 and Peggy Schuette '91, '98, Joanne (Schuette) Golden '79 and Matthew Golden. Income from this endowment will be for a renewable scholarship for a full-time junior or senior enrolled in the College of Business Administration studying Finance and/or Real Estate. Recipient must maintain a cumulative minimum GPA of 3.5 and demonstrate financial need. Preference will be given to a student who graduated from a school district in the Upper Peninsula of Michigan. If no eligible recipients, scholarship may be awarded to any student located in the state of Michigan.

**Yda Lou Schultz Scholarship**

Established for sophomore, junior or senior students in music education by sisters Frances Steel and Alma Miner and friends in memory of Yda's long devoted service to CMU and valuable contributions in the fields of elementary music education, special education, Kodaly and Orff.

**Jerry & Glad Scoby Endowed Scholarship**

Established in 2017 by Jerry '78, '82 and Glad Scoby. Income from the award will be for a full-time undergraduate student enrolled in the College of Business Administration. Recipients must have a minimum cumulative GPA of 3.0 and demonstrate financial need. Preference will be given to students from Beaverton Michigan schools.

**Scribner Family Scholarship**

Established in 2006 by Charles (Class of 1960) and Gerry Scribner. Income from the endowment will support a renewable scholarship in the College of Business Administration for students who can demonstrate financial need and have a minimum GPA of 3.0. Preference will be given to students who graduated from either Mount Pleasant High School or Cadillac High School.

**Ron Sendre Athletic Training Education Award**

Established in 2013 by Ron and Beth Sendre. Ron is a retired Athletic Training professor. Income from this endowment will support an award for a full-time student majoring in Athletic Training within the Herbert H. and Grace A. Dow College of Health Professions. Recipient will be a 4th semester intern. Preference will be given to a student who is the first member of his/her family to attend college, demonstrates success with a minimum GPA of 3.3, SATO member in good standing who has held a leadership position and has been an active member within the community.

**Sepanski Endowed Award in Math**

Established in 2010 by Jungsywan Sepanski, CMU mathematics professor. Income from the endowment will support an award for a junior or senior in the department of math with a minimum 3.5 GPA.

**Lester H. and Jack D. Serier Endowed Memorial Scholarship**

Established in 2001 by Maryann Serier in memory of her husband Lester Serier, a former CMU mathematics professor and son, Jack Serier (Class of 1964). Proceeds from the endowment will be used to support a scholarship for a Michigan resident with junior or senior status majoring in mathematics with a minimum 3.0 GPA. Preference shall be given to students who demonstrate financial need.

**Mary Kathleen Schuch Endowed Scholarship**

Established in 2014 from the estate of Mary Kathleen Schuch '51, '54. Income from the endowment will support a renewable scholarship for a student enrolled in the Teacher Education program in the College of Education and Human Services with a cumulative minimum GPA of 3.0, demonstrating financial need. Preference will be given to student(s) who are transfer students from a community college in the State of Michigan.

**Freddie Link Simonds Scholarship**

Established in 1987 to honor Freddie Link Simonds. Income from the endowment will support a scholarship for a junior or senior with a minimum GPA of 3.0 enrolled in the Department of Fashion, Interior Design, and Merchandising. Preference will be given to a student studying Fashion Merchandising and Design. If no applicants meet the above criteria, then a student studying Dietetics may be awarded the scholarship.

**John B. Slater Scholarship**

Established through the estate of John B. Slater, former professor emeritus, Department of Industrial Engineering and Technology, for a School of Engineering and Technology junior or senior student.

**Gail Sleeper Memorial Endowment**

Established in 2011 by David C. Sleeper '72, '78 in memory of Gail E. Sleeper '72. Income from the endowment will support an award for a full-time junior or senior CMU student from Gladwin High School. The non-renewable award will go to a recipient who demonstrates financial need and has a cumulative minimum GPA of 2.5. Preference will be given to a student who is pursuing a degree in elementary education.

**Marjorie Rogene Trout Slocum Music Scholarship Endowment**

Established in 2016 by the estate of Marjorie Rogene Trout Slocum '48 and her son, John Slocum. Marjorie was a composer of sacred music, which was her passion in life. Income from this endowment will support a renewable scholarship for a full-time student enrolled in the School of Music with a signed music education major and a cumulative minimum GPA of 3.0.

**Irvine N. Smith Memorial Scholarship**

Established in 1978 by Nancy Page Smith, family, and friends in memory of Irvine N. Smith, a member of the faculty for eight years and director of university theater from 1974 through 1976, for a freshman, sophomore or junior student as an incentive award in acting and/or directing.

(continued)



**John and Jeannette Smith Endowed Education Scholarship**

Established in 2013 by John M. Smith '69, '74, '83 and Jeannette K. Smith '69, '75-'95. Income from the endowment will support an award for junior or senior enrolled in the College of Education and Human Services who has earned a minimum GPA of 3.0 and has been accepted in to the teacher education program with a focus on math or science.

**Johnie D. Smith Memorial Scholarship**

Established in 2003 by the CMU Association of Faculty and Staff of Color to honor Johnie D. Smith '86, CMU professor of African-American history and constitutional history of the United States. Dr. Smith passed away in 1997. Income from the award will be used to support a nonrenewable award for students committed to the advancement of underrepresented minorities in American society and those who demonstrate great academic potential. Applicants must submit a personal narrative addressing how the award would allow the student to achieve his/her academic goals and advance the cause of diversity at CMU and also maintain a cumulative minimum GPA of 2.5. Preference will be given to students who reside in Saginaw, Midland, or the Mount Pleasant/Central Michigan area.

**M. L. Smith Scholarship**

Established in 1955 by the Appleblossom Club in honor of Dr. M. L. Smith, former director of field services and head of the rural education department, for a student accepted into the teacher education program with a child development minor. The scholarship may be renewed provided a 3.0 or higher GPA is maintained. Application may be made to the Department of Teacher Education and Professional Development.

**Woodward C. and Constance E. Smith Scholarship**

Converted in 1995 from a loan fund established in 1967 to recognize Woodward C. Smith for his life-long devotion to education at all levels upon his retirement as CMU vice president. Constance E. Smith was a very active ambassador for CMU and was involved in Faculty Dames and also housed many students with financial difficulty and students from overseas. Annual spendable investment income will be awarded to CMU students based on financial need as determined by the Office of Scholarships and Financial Aid.

**Paul G. Smuts Endowed Scholarship Fund**

Established in 2003 by Paul (Class of 1962) and Sandy (1961) (Moore) Smuts. Paul retired from DaimlerChrysler in 2002 as vice president of human resources operations and facilities management. This renewable scholarship will support a student enrolled in the College of Business Administration who participates in extracurricular activities, demonstrates financial need, and has a minimum GPA of 3.0.

**Sandy (Moore) Smuts Endowed Scholarship Fund**

Established in 2006 by Paul (Class of 1962) and Sandy (1961) (Moore) Smuts. Income from the endowment will support a scholarship for a student enrolled in the College of Education and Human Services with a major in elementary education who demonstrates financial need and has a minimum GPA of 3.0.

**Amanda Snow Scholarship**

Established in 2018 by Dr. Jeffrey '03 and Andrea Sarata '05, '09. Income from the endowment will support a non-renewable award for a junior or senior demonstrating financial need with a cumulative minimum GPA of 2.5. Preference will first be given to applicants majoring in Family Studies, followed by Early Childhood Development and Learning within the College of Education and Human Services.

**Sole-Parent Household Chip Scholarship**

Established in 2007 by CMU Women's Connection donors. This association provides a platform for alumnae and friends to be actively engaged in the advancement of the university and to promote enhanced learning opportunities for CMU students. Income from this renewable award will support a part-time or full-time student at CMU who is a single parent\* or to a student from a single parent\* household. Recipient must demonstrate financial need with a minimum GPA of 2.75. (\*"single parent" defined as a sole parental figure who shoulders the day-to-day responsibilities of raising a child without any assistance, financial or otherwise, from the other parent or partner, regardless of current or previous marital status to one another).

**Somes Family Endowed Award in Entrepreneurship**

Established in 2015 by Douglas D. Booher '92 and Michelle Somes-Booher '91, '98, and Corydon '77 and Nancy Somes. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration majoring in Entrepreneurship. Recipient will be a resident of Michigan with a cumulative minimum GPA of 3.0 or higher.

**Paul Spece Award**

Established in 1999 in memory of CMU accounting professor Paul Spece, for a junior or senior accounting major.

**Sport Management Endowed Award**

Established in 2014 by Dr. Vincent Mumford, and friends. Income from this endowment will support a renewable award for a student pursuing a Sport Management major or minor within the Department of Physical Education and Sport with a cumulative minimum GPA of 3.0 or higher.

**Dr. Samuel Spralls Endowed Scholarship**

Established in 2018 by Dr. Samuel Spralls, a Marketing professor in the department of Marketing and Hospitality Services Administration. Income from the endowment will support an award for a student enrolled in the College of Business Administration, Department of Marketing, Hospitality, and Logistics, majoring in Marketing with a cumulative minimum GPA of 2.75. Student must have completed at least one semester of academic coursework. Preference will be given to a student from historically underrepresented populations, especially those that are first generation college students and are willing to promote diversity on campus.

**Philip J. Squattrito Endowed Scholarship**

Established in 2014 by Philip J. Squattrito, a CMU chemistry professor. Income from the endowment will support a renewable award for a student with a signed chemistry major with a minimum of 8 credit hours in Chemistry. Recipient will also have a minimum GPA of 3.0 both cumulatively and for chemistry courses.

**Richard and Karen St. Andre Endowed Award**

Established in 2004 by Richard and Karen St. Andre, the income from the endowment will support a non-renewable award for a sophomore student with a signed major in the Mathematics Department (currently mathematics and mathematics education). The recipient must be a Michigan resident and show good potential for being successful in their major.

**Stark and Moreno Families Medical School Scholarship**

Established in 2016 by Jim '75 and Naomi Stark. Income from the endowment will support a renewable award for a full-time student enrolled in the CMU College of Medicine and a resident of one of the following counties: Lenawee, Jackson or Isabella. Recipient must have expressed financial need which is evident through required essay.

**Gilbert and Kay Starks Endowed Scholarship**

Established in 2006 by Drs. Gilbert and Kay Starks. Income from the endowment will support a scholarship for a student enrolled in a class on Beaver Island. The student will be enrolled in the College of Science and Engineering majoring in Biology with a minimum GPA of 3.0. Preference will be given to a student seeking secondary education certification.

**Dr. Glenn and Kathryn Starner Homecoming Leadership Award**

Established in 1998 by family and friends in recognition of the tireless hours Dr. Starner contributed to establishing a successful homecoming program and developing student leaders at CMU. The awards will be granted to students who are elected by the CMU student body to represent them as the Homecoming Gold Ambassadors.

**Nancy Stebbins Memorial Endowed Scholarship**

Established in 2014 by friends and family of Nancy Stebbins. Income from the endowment will support a renewable award for a junior or senior majoring in the field of social work with preference given to students demonstrating financial need. Recipient must have a minimum cumulative GPA of 3.5 and be a resident of the State of Michigan.

**Martin Steinbis Endowed Scholarship in Geology and Environmental Science**

Established in 2012 by Martin T. Steinbis. Martin graduated with a degree in Geology from CMU in 1975 and was a faculty member in the department for nearly a decade and wishes to make a difference in the lives of undergraduate students studying either Geology or Environmental Science. The recipient(s) will be a Geology or Environmental Science major within the College of Science and Engineering (or its future equivalent). Preference will be given to students demonstrating financial need and do not need to be enrolled full-time. Coursework may include attendance at an approved Geology Summer Field Camp or its equivalent. Award is renewable and preference will be given to students planning a career in the energy sector.

**James and Catherine Steinmetz Graduate Scholarship**

Established in 2011 by Dr. Joseph (Class of 1977, 1979) and Sandra Steinmetz to honor Joseph's parents, James and Catherine Steinmetz. Income from this endowment will support a renewable award for a graduate student majoring in Experimental Psychology, studying neuroscience, within the College of Liberal Arts and Social Sciences.

**Stephenson Engineering Scholarship**

Established in 1985 by Jo Stephenson and David Schock in honor of Jo's parents, Betty and Jack Stephenson, for a student pursuing an engineering technology curriculum.

**Ken Stevens Memorial Endowed Photojournalism Internship Scholarship**

Established in 2016 by the estate of Ken Stevens, friends and family. Income from the endowment will support a renewable award for a junior or senior who is enrolled in the College of Arts and Media. Recipient will be enrolled in the School of Communication, Journalism, and Media, or be a CM Life staff photographer, or a Grand Central Magazine staff photographer who has an interest in a media-related internship with a cumulative minimum GPA of 2.75.

**Fred Stolaruk Scholarship**

Established in 2021 by Fredric '71 and Katherine Stolaruk '71. Income from the endowment will support an award for undergraduate and transfer students enrolled in the College of Business Administration demonstrating financial need. The award is renewable for up to two years should the student maintain a cumulative minimum GPA of 3.0.

**Mary L. Copley Stout Endowed Scholarship in Teacher Education**

Established in 2017 by Mary L. Copley Stout '54. Income from the endowment will support a renewable scholarship for a junior or senior admitted to the Teacher Education program who demonstrates financial need and has a cumulative minimum GPA of 3.0. Preference will be given to students majoring in Elementary Education.

**John W. Stressman, Jr. Scholarship**

Established by family and friends in memory of John W. Stressman, Jr., former director of financial aid, for a student in the College of Business Administration. The scholarship may be renewed.

**Student Army Training Corps Scholarship**

The Student Army Training Corps (SATC) Loan Fund established in December 1971 was converted to an endowment in 1988. The SATC was a U.S. Army organization stationed on campus during World War I. Earnings provide an academic achievement award with preference given to children or grandchildren of any United States war veteran.

**Study Abroad and Study Away Programs in Teacher Education**

Award will be for a student(s) accepted in the teacher education program who is(are) participating in a teacher education study abroad or study away program with a clinical component.

**Kevin J. Summers Endowed Scholarship**

Established in 2014 by R. Kim Summers '78, in honor of his brother, Kevin J. Summers. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration with a concentration in either Entrepreneurship or Marketing with a cumulative minimum GPA of 3.0. Preference will be given to those from either Kent or Otsego County who demonstrate financial need and are active in community service.

**Leonard and Betty Summers Endowed Scholarship**

Established in 2007 by R. Kim Summers (Class of 1978) in honor of his parents, Leonard and Betty Summers. Income from the endowment will support a renewable award for a student enrolled in the College of Science and Engineering and Department of Computer Science. Student will have a minimum GPA of 3.0 and preference will be given to those from Otsego County who demonstrate financial need and are active in community service.

**Dr. Richard Sussman Endowed Award**

Established in 2020 by friends, in memory of Dr. Richard Sussman, a former CMU finance & law professor. Income from this endowment will be for a renewable scholarship for a full-time senior enrolled in the College of Business Administration studying Finance. Recipient must maintain a cumulative minimum GPA of 3.0 and demonstrate financial need.

**Mark and Michelle Szymczak Endowed Scholarship**

Established in 2007 by Mark (Class of 1991) and Michelle Szymczak (1991, 1997). Income from the endowment will support an award for a student enrolled in the College of Business Administration. Preference will be given to students who are studying SAP and have a strong record of leadership on campus. Preference will also be given to students in the Department of Business Information Systems or School of Accounting. Applicant must be a junior or senior and have a minimum GPA of 3.0.

**Grace Helen Tallman Legacy Endowment**

Established in 2022 by Nate '07, '09 and Nicole '10 Tallman in loving memory, and to honor their beloved daughter, Grace Helen Tallman (d. 2019). While at CMU, Nicole was a Centralis Student, and was also awarded Freshman of the Year in '07. Nathan was a Leadership Advancement Scholarship recipient, and an involved student leader within the Leadership Institute. After graduation, Nate served as CMU's Alumni Association Board President (2019-2021), and currently serves on the Advancement Board. Because of the profound impact nurses have had on the Tallman family, as well as the exceptional education received through their time at CMU, the Tallman Family has established the Grace Helen Tallman Legacy Endowment to support a senior enrolled in the Herbert H. & Grace A. Dow College of Health Professions pursuing a Bachelor of Science in Nursing within the Registered Nursing to Bachelor of Science in Nursing program (RN-to-BSN). Preference will be given to students who express interest within the pediatric field. Student applicants are required to submit an essay describing an experience in their life that has inspired them to pursue a career in nursing and their passion for pediatric care.

**Target Corporation Endowed Student Award**

Established in 2001 by the Target Corporation. Proceeds from the endowment will be used to establish an award for full-time students who have demonstrated financial need and maintain a 3.0 GPA.

**Ethel Nellie Taylor Scholarship**

Established through the will of Ethel N. Taylor (Class of 1910) for students selected by Scholarships and Financial Aid.

**Mae Teeters History Award**

Established by V. Mae Teeters and her family in 1985 in appreciation of the opportunity to further her education and to encourage the pursuit of excellence in the study of history. Mrs. Teeters earned a B.A. in 1972 and M.A. in History in 1985 at age 87. Mae Teeters was a prime example of life-long learning, dedicated community service and an inspiration to those who knew her. The endowment will recognize similar people who have a quest for life's knowledge and historical learning and provide an award to an outstanding history student.

**Telephone Pioneers of America, Great Lakes Chapter 90 Scholarship**

Established in 1995 for Michigan resident, junior, senior or graduate students within teacher education with a cumulative GPA of 3.0 or higher and proven community service. The scholarship is based on full-time enrollment and renewable based on reapplication. First preference will be given to relatives of telephone industry employees or retirees. Application may be made through the Department of Teacher Education and Professional Development.

**Harold E. and Nancy N. Telfer Scholarship**

Established in 1997 in memory of Dr. Harold Telfer. Dr. Telfer was a professor and department chair in Teacher Education and Professional Development. Nancy is a retired educator from the Mount Pleasant Public Schools. The scholarship is available for juniors or seniors admitted to the Teacher Education Program with an overall GPA of 3.0 or higher and demonstrated financial need.

**Steven J. Thatcher Scholarship**

Established in 1989 through the estate of Steven J. Thatcher (Class of 1970) for an undergraduate with preference given to students from high schools in Ionia County.

**Thavenet Study Abroad Scholarship**

Established in 1999 by Dennis Thavenet, who served as professor in the Department of History from 1967 to 1997, for a junior or senior history student studying abroad, with some preference for study in the Netherlands. Recipient must be studying abroad for a semester or longer.

**Thavenet Study Abroad History Scholarship**

Established in 1999 by colleagues in honor of Dennis Thavenet, who served as professor in the Department of History from 1967 to 1997, for a junior or senior history student studying abroad, with some preference for study in the Netherlands. Recipient must be studying abroad for a semester or longer.

**Thomas Family Endowed Scholarship in Special Education**

Established in 2022 by Diane L. Thomas '79 and her husband Doug, to support undergraduate students enrolled in the College of Education and Human Services majoring in Special Education. Diane, a retired special educator, credits Central Michigan University with providing her valuable collegiate experiences and preparing her for a rewarding career as a special educator. She hopes to provide the same life-changing experiences for future generations of CMU students. Endowment will support a renewable award for a student demonstrating financial need with a cumulative minimum GPA of 3.3. Recipient will be a U.S. citizen or a permanent resident and applicant should also include a personal statement regarding their commitment to teaching in the United States of America.

**Charles Warren and Denzil Slentz Thornthwaite Scholarship**

Established in 1962 as the Denzil Slentz Thornthwaite Memorial Fund by C. Warren Thornthwaite in honor of his wife. Their daughters later made the scholarship a memorial to their parents, both of whom were alumni. The recipient is a student who plans to pursue a career in geography or climatology. The scholarship is available to juniors or seniors majoring in Geography with a minimum 3.00 GPA in Geography and a 2.75 GPA overall with demonstrated financial need.

**Mike and Beth Tierney Endowed Scholarship**

Established in 2007 by Michael (Class of 1977) and Elizabeth Tierney (1977). Income from the endowment will support a renewable award for a student from southeast Michigan with a minimum GPA of 3.0 and demonstrated involvement in leadership activities. Preference will be given to students pursuing a major in the College of Business Administration or a major in communication sciences and disorders in The Herbert H. and Grace A. Dow College of Health Professions.

**Jean and James Townsend University Theatre Endowment Fund**

Established in 2002 by Jean Townsend, Dow Chemical research leader, and James Townsend, retired manager, university relations and recruiting, The Dow Chemical Company. Proceeds from the endowment will be used to provide discretionary resources for the University Theatre program, including the support of student scholarships/financial aid, theatre production equipment and guest artists, in the College of the Arts and Media, Department of Theatre and Dance.

**Charlotte W. Trout Award in Human Environmental Studies**

Established in 1979 by Mr. and Mrs. George J. (Elinor Trout) Verville for a junior or senior majoring in Human Development and Family Studies who gives promise of becoming outstanding in the field and who is dedicated to preservation of the family. Selection is made by members of the department.

**Troutman-Munson Education Scholarship**

Established in 2012 by Linda Munson George '69 in memory of her father, Dr. Carl Munson '34 and her great uncle, Oliver W. Troutman. Oliver Troutman was a professor at CMU and the Oliver Troutman Residence Hall is named in his honor. He and his wife raised four nephews, including Carl Munson, a former member of the CMU Development Board, while he taught classes from 1913 - 1933. Income from the endowment will support a renewable award for a full-time student enrolled in the College of Education and Human Services with a minimum GPA of 3.0. Preference will be given to students from Michigan or New York.

**Lem Tucker Journalism Scholarship**

Established to honor the late Lemuel Tucker, an African American and CMU alumnus who made an enormous contribution to journalism, promoting the participation and success of minorities in print and electronic media. Scholarship candidate(s) must be a senior in high school with a cumulative GPA of 3.0 or higher with a minimum 18 on the ACT or minimum of 850 on the SAT; or a transfer student with proof that 24 credit hours will be completed prior to starting at CMU and also that he/she has maintained a cumulative GPA of 3.3 or higher.

**Two Men and a Truck International Phi Chi Theta Endowment**

Established in 2009 by Two Men and a Truck International to support the mission of Phi Chi Theta. Can be used for member scholarships/awards, travel to conferences, meetings, etc., programmatic support, on campus recruiting efforts, professional development and speakers.

**Robert D. Ullom Baseball Endowed Scholarship**

Established in 2004 by Robert Ullom (Class of 1957). Income from this endowment will support the CMU Baseball program with a renewable scholarship and/or operational budget. Preference will be given to a CMU baseball student athlete, of at least sophomore status and who possesses a minimum 3.0 GPA.

**United Apartments McGuirk Family Scholarship**

Established in 2018 by United Apartments and the McGuirk Family. Income from this endowment will be for a renewable scholarship for a full-time sophomore, junior or senior enrolled in the College of Business Administration. Recipient must maintain a cumulative minimum GPA of 3.0 and demonstrate financial need. Preference will be given to students that are current or former United Apartment customers and also those studying Finance and/or Real Estate.

**Urban Land Institute Detroit District Council Real Estate Scholarship**

Established in 2016 by the Urban Land Institute Detroit District Council. Income from the endowment will support a scholarship for a junior or senior majoring or minoring in the College of Business Administration's real estate development and finance major with a GPA of 3.0 or higher.

**Katherine Ardis Ux Endowed Award in Art**

Established in 2001 by Evert and Dorothy Ardis in honor of his sister Katherine Ardis Ux, former art department faculty member and accomplished artist. Proceeds from the endowment will be used to support one annual award for a senior majoring in art and who intends to pursue further study or conduct research in the field of art in a master's program or other type of structured art program.

**William E. Valle Design and Technical Theatre Award**

Established in 2005 by William E. Valle and friends. Bill is a retired professor who taught scenery design, lighting design, and technical theatre at CMU for 35 years. Income from the renewable endowment will support an award for a student who participates and has an interest in the study of design or technical theatre, has demonstrated promise in the field of scenery design, lighting design, or technical theatre and has a minimum GPA of 2.0 on a 4.0 scale.

**Deobold B. and Marcella M. Van Dalen Scholarship Fund**

Established in 2010 by the estate of Deobold B. (Class of 1935) and Marcella M. Van Dalen. Income from the endowment will be divided equally between three areas: physical education majors (The Herbert H. and Grace A. Dow College of Health Professions); education majors (College of Education and Human Services) and a major in a non-education field. The recipients will be juniors or seniors demonstrating financial need pursuing an approved major program of study while maintaining a minimum 3.0 grade point average. Priority will be given to students who are seeking graduate school, research work or leadership roles in their respective fields. The scholarship may be renewable for one additional year.

**Linda VanLoon Residence Life Leadership Award**

Established in 2019 by Linda VanLoon '70. Income from the endowment will support a non-renewable scholarship for a full-time student employed by the Office of Residence Life as either a Resident Assistant or Inclusion Assistant. Preference will be given to applicants with at least two semesters of prior service as a Resident Assistant or Inclusion Assistant at CMU.

**Charles and Suzanne Vannorsdall Endowed Award in Physics**

Established in 2014 by Charles '63 and Suzanne Vannorsdall. Income from the endowment will support a renewable award for a full-time student majoring in Physics or Astronomy. The award may be used for conferences, presentations and field trips.

**Robin Dilling Vatalaro Accounting Scholarship**

Established in 2012 by Wendell and Marcia Dilling in honor of their daughter, Robin Dilling Vatalaro '88. Income from the endowment will support a renewable award for a senior enrolled in the College of Business Administration, with a major in Accounting. Preference will be given to students who have a GPA of at least 3.0.

**Richard E. Veazey Endowment**

Established in 2011 by the estate of Richard E. Veazey (Class of 1966). The endowment will support special experiences for CMU College of Business Administration students, with preference given to accounting students, in the form of small stipends or scholarships to support transformational experiences such as (but not limited to) study abroad opportunities and internships at nationally-recognized institutions.

**Ernest E. and Phyllis L. Vegter Scholarship**

Established in 1984 by family and friends of the late Ernest E. Vegter for graduating seniors of Bay City, MI, public high schools who desire to pursue a career in teaching secondary education.

**Stanley and Madalin Vihtelic Study Abroad Scholarship**

The recipient(s) of this scholarship will be student(s) with good academic standing (a 3.0 GPA for undergraduate students and a 3.2 GPA for graduate students) who choose to study abroad for a length of up to a year. The student(s) must be approved to study abroad through CMU, be a U.S. citizen or a permanent resident enrolled full time at CMU at the time of the award and during the term of study abroad. The Office of the President with the assistance of the Office of International Education and the Office of Scholarships and Financial Aid will determine the number, amount, and recipient(s) of the Scholarship. The Office of the President may set up processes for a Scholarship Award Committee to recommend recipients of the Scholarship, as appropriate for the gift. The expenditure of the income from this gift will be approved by the Office of the President at least annually.

**Velser/Prasad Endowed Scholarship**

Established in 2005 by Dr. S. Benjamin Prasad, a retired CMU professor of management and law. Income from this endowment will support a renewable scholarship(s) for a junior or senior who is enrolled in the College of Business Administration majoring in international business, has a minimum GPA of 3.25, and is a citizen of the United States.

**Shirley Larzelere Viele Scholarship**

Established in 2013 by George B. Viele '60, '65 in memory of Shirley Larzelere Viele '55. Income from the endowment will support a renewable award for a student majoring in chemistry whose objective is to become a high school chemistry teacher and is involved in campus activities such as the American Chemistry Society Affiliate, intramural sports, etc. The scholarship will be awarded on the basis of merit and financial need, although it may be awarded on the basis of merit alone.

**Voigtman Family Endowed Scholarship**

Established in 2006 by Jon '84 and Terri '85 Voigtman. Income from the endowment will support a renewable scholarship for a junior or senior enrolled in the College of Business Administration with a minimum 3.0 GPA. The recipient must be a Michigan resident. Preference will be given to students who have an interest in working in capital markets.

**Wakely Associates Teacher Education Scholarship**

Established in 2004 by Wakely Associates, Inc. of Mount Pleasant, Michigan. Income from this endowment will support a renewable scholarship for a junior student enrolled in the teacher education program who can demonstrate financial need. Preference will be given to students graduating from a specific list of Michigan schools. The list may be obtained from the Office of Scholarships and Financial Aid.

**Sydney and Mary Walston Award**

Established in 2000 by Dr. Sydney Walston and his wife Mary Walston, both professors in the Department of Health Promotion and Rehabilitation. Recipient will be a junior or senior majoring in school health education or public health education, or graduate level in the Master of Public Health program. Student must have a cumulative minimum GPA of 2.5 or higher. The endowment is intended to support learning through attendance and participation at state, national or international professional conferences.

**The Kim and Mark Wagner Family Scholarship**

Established in 2020 by Kim '83 and Mark Wagner '82. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration demonstrating financial need. Freshman recipients will have a cumulative minimum GPA of 3.5 or higher and all other recipients will require a GPA of 3.0 or higher. Preference will be given to applicants enrolled in an accounting major.

**James H. Wanty Scholarship in Entrepreneurship**

Established in 2011 by James. H. Wanty (Class of 1971). Income from the endowment will support a renewable award for a junior or senior enrolled in the College of Business Administration and an entrepreneurship major. Preference will be given to students demonstrating financial need with a minimum GPA of 3.0.

**Daniel & Barbara Wardrop Endowed Fund for Applied Statistics & Actuarial Science**

Established in 2019 by Daniel '78 and Barbara Jane (Penney) Wardrop '78. Income from the endowment will support a non-renewable award for students entering their senior year of study in either applied statistics or actuarial science within the College of Science and Engineering. Recipients will maintain a minimum cumulative GPA of 3.5, and will submit an essay describing their interest and intent in earning a masters or doctoral degree in the fields of applied statistics or actuarial science. Preference will be given to applicants that provide a valid GRE test score in conjunction with their essay application. Preference will also be given to applicants who articulate a desire to attend Virginia Tech University for their graduate program of choice.



**John E. Warriner Scholarship**

Established in 1987 through the estate gift of John Edward Warriner, author of Warriner's Handbook of English and a six volume series titled English Grammar and Composition, for undergraduate and graduate students majoring in the humanities and social sciences. John was the son of Eugene C. Warriner, former CMU president.

**War Years Reunion Endowed Scholarship**

Established in 2001 by generous contributions from Central Michigan University classes of 1946 – 1951 in honor of World War II Veterans. Proceeds from the endowment will be used to support a scholarship for a student who is a United States citizen with preference given to those students who can substantiate lineage to a World War II Veteran. Students must have a demonstrated financial need by university standards and solid academic standing.

**Michael Waske Scholarship**

Established by Mrs. Michael Waske (Dorothy Wright (Class of 1951) in memory of husband, Michael (1951), for students in need of financial aid with preference given to students from the Marlette and Sandusky areas.

**William and Molly Weideman Scholarship**

Established in 2018 by William '76 and Molly Weideman. William is currently a CMU Board of Trustees member, as well as a member of the Accounting Advisory Committee, Medical Steering Committee, and previously the Advancement Board. Income from the scholarship will support student success with first preference being set for students from select open high schools.

**Ruth M. M. Wesley Scholarship**

Established in 1998 by Judith Mynsberge in memory of her aunt, Ruth M. M. Wesley, who graduated from Central State Teachers College with a "lifetime" certificate in 1933. This scholarship is available for students from the Bay County area with financial need who are pursuing a teaching career.

**George R. Wheeler Scholarship**

The loan fund established in honor of Mr. Wheeler's career as chairperson of the Department of Conservation and Agriculture from 1947 to 1960 was converted to an endowment in 1993 for a student pursuing studies in outdoor environmental education, ecology or conservation.

**Edward, Bertha and Stephen Whitmore Mathematics Scholarship**

Established by family and friends to commemorate the lives of Edward Hugh Whitmore, Bertha Harper Whitmore and Stephen Harper Whitmore for senior students who have earned a 3.6 or higher in their mathematics major. Dr. Edward Whitmore was a mathematics professor between 1965 and his retirement from CMU in December 1987. He served as department chairman from 1965 to 1974 and from 1976 to 1982. Mrs. Bertha Whitmore was a science teacher for Mt Pleasant Public Schools between 1966 and her retirement in 1987. Stephen Whitmore, son of Edward and Bertha, was a partner with the New York law firm of Berlack, Israels, and Liberman. He specialized in the areas of corporate finance and securities law.

**Craig Whitney Scholarship**

Established through the estate of Mrs. Roxanna M. Whitney, widow of Clayton A. Whitney (Class of 1909), former chairman of the geography department of State Teachers College at LaCrosse, WI.

**Scott and Caryn Wickens Endowed Award in Finance**

Established in 2018 by Scott '89 and Caryn Wickens '88. Income from this endowment will be used to fund a renewable scholarship for a full-time student enrolled in the College of Business Administration majoring in the Department of Finance and Law with a cumulative minimum GPA of 3.0.

**Carol and Lars Wigert Study Abroad Award**

Established in 2015 by Carol '56 and Lars Wigert to provide opportunities for juniors and seniors to study abroad so they may grow in the knowledge of cultures, values, political systems, religions and peoples who live outside their communities and the United States. Income from the endowment will support a junior or senior with a cumulative minimum GPA of 3.0 or higher with a desire to study abroad for a minimum of one semester. The recipient will share with the donors, upon his/her return, orally or in writing, the ways in which the award contributed to his/her educational experience.

**Helen A. and W. Lyle Willhite Scholarship**

Established in 1986 by Mrs. W. Lyle Willhite, daughter Maryhelen, colleagues and friends in memory of W. Lyle Willhite, first dean (1960 to 1976) of what is now the College of Business Administration and a professor of finance.

**Louise A. Williams Award**

Established in 2009 by the estate of Louise A. Williams, emerita faculty. Income from the endowment will support a rotating award for a student enrolled in the physical education program in The Herbert H. and Grace A. Dow College of Health Professions, dance in the College of the Arts and Media, or Athletics.

**Louise A. Williams and Jane McNamara Endowed Award**

Established in 2003 by Jane McNamara and Louise A. Williams, retired physical education and sport professors. Proceeds from the endowed award will be used to support a student with junior or senior class standing who has declared a major in a health professions area and who has a GPA of 3.5 or higher. First preference will be given to a student who is a resident of Isabella County.

**Paul I. Willwerth Brass Endowed Award**

Established in 2002 by Phi Mu Alpha, a music academic group, and Patricia G. Willwerth, in honor of her husband, Paul I. Willwerth, former faculty member. Proceeds from the endowment will be used to support a scholarship for an undergraduate student enrolled in the School of Music within the College of the Arts and Media pursuing a bachelor's in music or music education degree. The recipient must have reached 300 level music candidacy and study a brass instrument with a minimum 3.5 GPA.

**Lillian M. Winsor Scholarship**

Established in 1977 by a friend of CMU for students within the College of Business Administration who are gainfully employed during the academic year. The scholarship may be renewed provided the student maintains a satisfactory academic average and continues to be employed.

**Corey Paul Woiteshek Beaver Island Endowed Award**

Established in 2007 by friends and family in memory of Cory Paul Woiteshek (Class of 1997). Income from the endowment will support a junior or senior biology major with a minimum GPA of 3.0. The recipient will be enrolled in at least one class at the CMU Biological Station on Beaver Island and provide a paragraph on their interests and goals related to their love of nature.

**Jim and Carol Wojcik Endowed Journalism Scholarship**

Established in 2005 by Jim '65, '68 and Carol L. Wojcik '68, '89 and friends. Jim was employed by CMU as the director of student media before his retirement. He currently is a fixed-term faculty member in the School of Communication, Journalism, and Media and also teaches in the Integrative Public Relations program. He is a current member of the College of the Arts and Media Capital Campaign Committee and is a former member of the CMU Journalism Alumni Advisory Board. Carol retired from CMU in 2005 as the director of student disability services. Income from the endowment will support a renewable scholarship for a student who is participating in a non-paid internship and is a junior or higher in good academic standing. Recipient must also have a cumulative minimum GPA of 2.75 and be participating in an approved student media program or pre-professional organization including but not limited to: PRSSA, PR Central, Central Michigan LIFE, Grand Central Magazine, Ad Club, etc.

**Harvey E. Wood Education Award**

Established in 2000 in memory of Harvey E. Wood (Class of 1951), former teacher and principal at Holt High School. The award is for a Holt graduate with a minimum 3.25 GPA, an interest in education, and who demonstrates financial need by university standards. Submission of a one-page biographical letter of application indicating involvement in extracurricular activities is required.

**Kenneth Wright Physics Scholarship**

Established in 1998 by the sons of Kenneth Wright (Class of 1934), a CMU physics teacher for over 30 years, for a third-year student with a declared major in physics, a minimum 3.5 GPA in classes offered by the physics department, and a minimum 2.5 GPA overall.

**Wilbert Wright Endowed Memorial Award**

Established in 2001 by Geraldine Wright (Class of 1977) in memory of her husband Wilbert Wright, Ph.D., former member of the CMU Counseling Center staff. Proceeds from the endowment will be used to establish an award for full-time, first-generation college students with junior or senior status majoring in psychology with a minimum 3.0 GPA.

**William A. and Marcia L. Wright Scholarship in memory of Randall and Joanne Robertson**

Established in 1993 by Pauline Ellis to commemorate her daughter Joanne (Class of 1950) and amended in 2011 by William A. (1974, 1982) and Marcia L. Wright (1978) in memory of her parents, Randall (1949) and Joanne Robertson (1950). Income from the endowment will support an award for a junior from the state of Michigan, majoring in elementary education, demonstrating financial need with a record of academic excellence as demonstrated by a minimum GPA of 3.25.

**Daniel E. and Mildred G. Wujek Award**

Established in 1999 by CMU biology professor Daniel Wujek (Class of 1961) and his wife Millie (1989) for biology graduate students.

**Dr. Richard J. Zavodsky Endowed Scholarship in Teacher Education**

Established in 2018 by Dr. Audrey Zavodsky in memory of her husband and staunch CMU supporter, Dr. Richard J. Zavodsky '76. Income from the endowment will support a renewable scholarship for an undergraduate student enrolled in the Teacher Education program within the College of Education and Human Services. The recipient will demonstrate financial need and will be seeking elementary teacher certification. Preference will be given to first generation college students and to early childhood development and learning majors.

**Mark and Elaine Zellner Endowed Award**

Established in 2009 by Mark (Class of 1975) and Elaine Zellner. Income from this endowment will support an award for an incoming freshman from Allen Park High School who demonstrates financial need and has a minimum GPA of 3.0. In the event there are no qualifying candidates from Allen Park High School, candidates will be considered from Riverview Gabriel Richard and Dearborn High School.



**Harold W. and Dorothy V. Zeoli Computer Science Award**

Established in 1988 by family, colleagues and members of the Department of Computer Science in memory of Dr. Harold Zeoli for students majoring in computer science. Dr. Zeoli was instrumental in introducing the study of computer science at CMU,

**Dr. Habib A. Zuberi Endowed Scholarship**

Established in 2000 by Dr. Habib Zuberi, Ph.D., professor emeritus, and Rosemary Zuberi. Proceeds from the endowment will be used to establish a scholarship for a junior, senior or graduate student enrolled in the College of Business Administration and majoring in economics with a 3.3 minimum GPA.

**Global Campus Annual Awards****Global Campus Staff and Faculty Award**

Established in 2011, this award is funded by gifts from CMU's Global Campus staff and faculty members for the purpose of assisting students with the cost of tuition. Applicants must be pursuing a degree through CMU's Global Campus. Preference given to students admitted to or enrolled in their first semester.

**Joseph Cooley High Ebenezer Scholarship**

Established in 2015 by Joseph Cooley High '87. Income from the annual award will support a student accepted or enrolled in CMU Global Campus and who has an interest in the study of business, and who has a minimum GPA of 2.8. Preference will be given to assist first generation college students who have a history of supporting minority causes, who have graduated from a historically black college, and to single parents.

**The Joan M. and Clarence E. Mills Annual Award**

Established in 2011 by Joan M. and Clarence E. Mills for Global Campus students pursuing a bachelor's degree and are in their junior year or higher (56+ earned credit hours). Applicants must have earned a minimum GPA of 3.0 and must be employed full time by a publically-held electric utility.

**Yvonne Robertson Price Annual Award**

Established in 2012 for Global Campus students pursuing a degree leading toward a career in education. Applicants must be earning a minimum GPA of 2.5 for an undergraduate student or 3.0 for a graduate or doctoral student. First year students are eligible to apply providing they offer evidence of earning the minimum GPA while earning their high school diploma or highest degree earned. Preference will be given to students who have a history of supporting minority causes.

**U.S. Armed Forces Award**

Established in 2008 to honor severely injured military personnel, the spouse of a severely injured service member or veteran who has been honorably discharged within the last 4 years. Applicants must be current military personnel, veterans, or the spouse of such, who have incurred injuries while serving in combat on behalf of the United States, or veterans who have been honorably discharged within the last 4 years. Applicants must be new or returning Global Campus student and have a minimum GPA of 2.7.

**U.S. Armed Forces Textbook Award**

Beginning with the Fall, 2009 semester, active duty U.S. military personnel in pay grades E-1 through E-9, W-1 through W-4, and O-1 through O-3, and their immediate family members enrolled in a graduate or undergraduate degree program through CMU's Global Campus, are eligible to apply for financial assistance to purchase textbooks. Awards may not exceed \$250 per semester with a life-time maximum of \$500 per service member family. Applicants must have successfully completed six (6) credit hours through CMU's Global Campus and have a minimum GPA of 3.0.

# General Academic Information and Policies

## Classification of Students

A student is classified in accordance with the semester hours of credit earned as follows:

- Freshman - 1-25 semester hours of credit
- Sophomore - 26-55 semester hours of credit
- Junior - 56-85 semester hours of credit
- Senior - 86 or more semester hours of credit
- Graduate - After admission to CMU Graduate Studies

Classification is determined by the current Bulletin, not the issue in effect when the student was admitted.

## Full-Time Status

The definition of full-time status for a regular semester is as follows:

- Undergraduate students: a minimum of 12 credits
- Graduate students: a minimum of 9 credits

## Grades

### Grade Reports

At the end of each on-campus semester or session, students may access their grades via *CentralLink* (<https://centrallink.cmich.edu>).

### Credit and Points

The university uses specified quantitative and qualitative standards to appraise the quality of work done by its students.

**Quantitative Unit.** The quantitative unit of credit is the semester hour.

**Qualitative Unit.** The qualitative credit is the grade or rating used by the instructor to indicate an evaluation of the results accomplished. The work of the student in each course completed is rated in accordance with the following marking system.

### Undergraduate

Grades	Significance	Honors Points Per Semester Hour
A	Superior	4.0
A-		3.7
B+		3.3
B		3.0
B-		2.7
C+		2.3
C		2.0
C-		1.7
D+		1.3
D		1.0
D-		0.7
E	Failing	0.0
CR	Credit	
N	No grade submitted	
NC	No Credit	
I	Incomplete	Not included in computing hours and points
W	Withdrawal	
X	Audit	
Z	Deferred Grade	
H*	Honors Program	

\*(Designates Honors Credit in combination with letter grade of C or better)

The marking system for CMU graduate students is described in the Graduate Bulletin.

## Undergraduate Grade Point Average

The grade-point average for undergraduate students is found by dividing the total honor points earned by the total graded hours.

### Recomputation of Grade Point Average

An undergraduate student may petition for recomputation of the student's cumulative grade point average if:

1. the student has not attended CMU or any other institution for four or more consecutive years, and
2. the student re-enrolls after the student's matriculation was canceled or after withdrawing voluntarily with a cumulative grade point average under 2.00 (academic probation).

A petition form for recomputation may be obtained from the Academic Advising and Assistance office. This policy may apply to students presently enrolled at CMU.

If the petition is approved, all courses taken will remain on the permanent record. Those courses with grades of A, A-, B+, B, B-, C+, C, C-, or CR will be counted for credit only. The student resumes their academic program at CMU with no cumulative grade-point average, and thereafter is subject to the conditions of probation and dismissal that govern all students. A student may not graduate from Central Michigan University under this policy unless he/she earns at least 12 semester hours of credit at this institution after the recomputation has been granted.

### Honors for Recomputations

Students who have had a recomputation of grade point average must meet the following criteria to be eligible for graduation with honors: At the beginning of the student's final semester must have completed 45 hours of residence, of which 33 hours are letter graded, and a cumulative point average as indicated in the Graduation with Honors table. Only hours completed after the recomputation are eligible for this requirement.

### Point Deficiency - Undergraduate Students

A point deficiency is defined as the number of points lacking to make a cumulative grade point average of 2.00.

### Change of Grade

A request to change a grade may be initiated by an instructor electronically using "Web Grades" via CentralLink. The change of grade will be forwarded to the chairperson for approval and also to the dean of the college.

Requests for change of grade involving error by an instructor--such as error in recording grade, transpositional error, error in transferring grade to Final Grade List, miscalculation, computational error, error in scoring final exam, test or assignment grade not recorded, papers misplaced by instructor and found after grade was recorded, error in graduate assistant or lab assistant reporting grade to grading instructor, or instructor forgetting that a student had been promised an "I" grade--shall be processed by the Registrar's Office without any action by a College Change of Grade Committee.

All other requests for change of grade are to be submitted by the dean to the College Change of Grade Committee. If the request is approved, the chairperson of the committee or the appropriate dean will electronically forward the change to the Registrar's Office for processing.

## Grade Grievance Policy

The University recognizes that it is the instructor's prerogative to determine a grade. Responsibility for resolving grading disputes is shared among the instructor, the student, the department, and the college. If a question is raised by a student concerning a grade, the instructor should discuss the matter willingly and give evidence to make clear their basis for determining the grade. In turn, the student should recognize the need to demonstrate a valid basis for complaint. At any time, either upon the student inquiry or upon their own initiative, the instructor who believes a change of grade is justified may initiate a request for a change in grade.

The following steps are available for review of allegations of capricious grading under the grade grievance policy. They are not for review of the judgment of an instructor in assessing the quality of a student's work nor are they to be used in cases involving violations of CMU's Academic Integrity Policy. Determination of the grade in such cases is left solely to the instructor.

Capricious grading, as that term is used herein, constitutes any of the following: (a) the assignment of a grade to a particular student on some basis other than their performance in the course; (b) the assignment of a grade to a particular student based on more exacting or demanding standards than were applied to other students in that course (and it is understood that standards for graduate credit may be different from standards for undergraduate credit); (c) the assignment of a grade by a substantial departure from the instructor's previously announced standards.

### Step 1:

- A student who desires discussion of a complaint about a grade shall contact the instructor or, if the instructor is unavailable, the department chairperson either in person or in writing as soon as possible, but in no case later than thirty days after the grade is posted. Any exception to the time limitation shall be for unusual and most compelling reasons. Ordinarily, the student should accept the instructor's decision. However, if the student is still not satisfied, they may request in writing a joint consultation with the instructor and the chairperson of the department involved. In a case in which the student's request for joint consultation involves an instructor who is also chairperson of the department, the student's request in writing should be sent to the dean of the school or college involved. In such cases, the dean shall act in place of the department chairperson.

### Step 2:

- A student who is not satisfied after consultation with the instructor and department chairperson and who alleges that the course grade is the result of capricious grading may file an appeal within forty-five days from the date of the posted grade to the dean of the instructor's college for forwarding to the College Committee on Review of Change of Grade. The student shall file the appeal by submitting a College Committee on Review of Change of Grade Appeal and accompanying documentation explaining the basis for the allegation that the grade was the result of capricious grading and presenting any evidence they may have.
- The appeal shall be dismissed if (a) the appeal was not timely; (b) the allegations, if true, would not constitute capricious grading; or (c) the student has not attempted to confer with the instructor or chairperson of the department. If the appeal is not dismissed the committee\* shall submit a copy of the student's completed College Committee on Review of Change of Grade Appeal and accompanying documentation to the instructor of the course with a request that the instructor promptly submit a written response thereto, a copy of which shall be made available to the student. If, upon the basis of these papers, the dispute appears to be attributable to inadequate or incomplete communication between the parties, the committee may arrange to meet individually or together with the student and instructor to discuss the problem. A teleconference can be arranged for an individual who does not reside in proximity to the main campus.

### Step 3:

- If such a meeting is not held or, if held, the meeting does not result in a mutually agreeable solution, the committee shall proceed to hold a fact-finding session concerning the allegations set forth in the appeal. Both the student and the instructor shall be entitled to be present throughout the session and to present any relevant evidence, including testimony by other persons. The student and the instructor both may be accompanied by a person to assist them in presenting evidence. The session shall not be open to the public.
- At the close of the session, the committee shall deliberate privately. If a majority finds the allegations of capricious grading to be supported by substantial evidence, the committee shall determine the most appropriate remedy. The committee may direct the instructor to grade the student's work anew, give the student a new examination in the course, or take such other action as will bring about substantial justice in the individual case. However, except in the most extraordinary circumstances, the committee itself should not award the student a new grade in the course. The decision of the committee shall be final and shall be reported in writing to the student, instructor, and the departmental office.

The College Committee on Review of Change of Grade may also resolve complaints involving suspected violation of grading policies for incomplete and deferred grades, dropping a class, or withdrawal from the university. The same procedures as outlined above for review of alleged capricious grading shall be followed.

\*If the instructor of the course is a member of the Committee, they shall be disqualified from considering the appeal.

*Approved by Academic Senate: 10-22-2019*

## Incomplete and Deferred Grade

**Incomplete Grade.** An "I" (Incomplete) grade is a temporary grade used by the instructor in cases when a student is unable to complete course requirements because of illness or other justifiable circumstances. An incomplete grade does not indicate enrollment for the period of time in which the work is done. It is assigned only in cases in which the student has completed satisfactorily the major portion of the course requirements, and has convinced the instructor of the student's ability to complete the remaining work without re-registering for the course. It is not to be given to a student who is already doing failing work. A form must be completed and signed by the faculty member (and the student, when possible) whenever a grade of "I" is assigned. The form is to be kept on file in the departmental office. An instructor who assigns a grade of "I" also submits a formal statement to the department chairperson of requirements to be satisfied for removal of the Incomplete grade. A copy of the statement of requirements, including deadlines for their completion, shall be made available to the student.

It is the student's responsibility to contact the instructor to make arrangements for completing the remaining work. The required work should be completed and a grade reported by the end of the student's next semester in residence, but in no case later than one calendar year following the receipt of the "I" grade. A student not completing the remaining work by the end of one calendar year following the receipt of an "I" would retain an "I" only if the instructor chooses not to change the "I" to a specific grade ranging from A to E by the end of the calendar year. An "I" may not be removed by registering again for the course. Students will not be allowed to register for the same course with an outstanding grade of I.

If the instructor of the class in which the "I" was incurred is no longer a member of the faculty, the student should contact the department chairperson, who shall act on behalf of the former instructor.

Exceptions to these regulations can be made only when requested by the student and approved by the instructor or the department chairperson and the dean of the college, and certified by the dean of the college to the Registrar.

**Deferred Grade.** The "Z" (deferred) grade may be recorded for students registered for independent study, for thesis, International Program Studies courses, or for other courses specifically approved for "Z" grades in the Bulletin, if the instructor believes that the quality and quantity of work completed by the end of the semester justifies an extension of time. An instructor who assigns a grade of "Z" shall submit, on the proper form, a statement to the department chairperson of remaining requirements for removal of the deferred grade. A copy of the statement of requirements, including deadlines for their completion, shall be made available to the student.

*(Academic Senate, 2/16/21)*

*For students with Financial Aid, see also Scholarships and Financial Aid, Satisfactory Academic Progress in the Index.*

## Undergraduate Academic Probation, Suspension, Dismissal, and Rematriculation Policies and Procedures

As part of an annual process occurring at the end of each spring semester, all students whose cumulative grade point average (GPA) is below 2.00 will either be placed on academic probation, academic suspension, or academic dismissal.

Students are encouraged to seek assistance from their instructors, advisors, and where appropriate, mental health professionals. Help can also be obtained from the Academic Support office, where students can get information about one-on-one tutors, tutoring, supplemental instruction sessions, the Writing Center, the Math Assistance Center, advising and coaching options, and various academic strategies for success. Academic Support is located at 250 Ronan Hall and can be reached at 989-774-7506 and at [advising@cmich.edu](mailto:advising@cmich.edu).

While it is important for students experiencing academic difficulty to seek assistance, instructors are encouraged to take action when a student is not succeeding in their courses. Instructors should work directly with the student and may report their concerns to the Early Alert Referral site or submit a CARE report.

### Academic Probation

Academic probation occurs when a student's GPA is below 2.00 but above the range for suspension or dismissal, which varies according to the student's attempted credit hours or total credit hours, whichever is greater. Total attempted hours include CMU credits earned or attempted at the 100-level or above, transfer credits, and hours earned in any other manner. For a full definition of attempted hours, refer to Table 1.

The university notifies students who are placed on academic probation, and encourages them to seek academic support resources. If a student is on academic probation for three consecutive semesters, including summer sessions, the student is subject to academic dismissal.

### Academic Suspension

Students who complete their first semester (at least 6 credit hours) of academic courses at CMU in the spring semester are assigned an academic suspension status if their spring semester GPA falls below the range for academic probation (See Table 1). The suspended status is a warning and students may not attend the next academic session until they appeal with the Academic Support Office. Details regarding a student's academic suspension status, suggestions for corrective action, and the appeal process are communicated following the official grade deadline for the spring semester by e-mail from the Academic Support office.

## Academic Dismissal

A student will be assigned an academic dismissal status at the end of the spring semester if they earn a cumulative GPA below the range for probation (see Table 1), or when a student has been on academic probation for three consecutive semesters.

The University notifies students who have been dismissed. Details regarding a student's academic status, suggestions for corrective action, and an appeal process are communicated following the official grade deadline for the spring semester by e-mail from the Academic Support office.

Consideration for enrollment is based on individual student circumstances. If students wish to return to the University, they must appeal through the reinstatement process with the Academic Support office (250 Ronan Hall, 989-774-3465) or see <https://www.cmich.edu/offices-departments/office-student-success/academic-support>.

Table 1. GPA Ranges by Total Attempted College Credits			
Attempted/ Total Credit Hours	Suspension- First Semester at CMU	Dismissal	GPA Range for Probation
6-18	0.0-0.99	0.0-0.99	1.00-1.99
19-35	0.0-1.49	0.0-1.49	1.50-1.99
36-45	0.0-1.69	0.0-1.69	1.70-1.99
46-58	0.0-1.79	0.0-1.79	1.80-1.99
59-71	0.0-1.84	0.0-1.84	1.85-1.99
72-85	0.0-1.89	0.0-1.89	1.90-1.99
86 and over	0.0-1.94	0.0-1.94	1.95-1.99
<i>Attempted/Total Credit Hours include every course at 100-level or above ever registered for that shows on the transcript and for which there is a grade or grade substitute such as W, I, CR, NC, N, or Z. This does not include courses dropped during registration. It does include credits transferred from other institutions and credits earned by other methods, such as Advanced Placement (AP), College Level Examination Program (CLEP), or International Baccalaureate (IB).</i>			

## Rematriculation/Reinstatement

A student who has been suspended or dismissed for academic reasons may appeal to return through the reinstatement process with the Academic Support office. Students who have been suspended may apply for immediate reinstatement. Students who have been dismissed may appeal for reinstatement consideration usually 12 months after dismissal. A student who has been dismissed twice will be reinstated only under extraordinary circumstances.

Reinstatement requires a written application, payment of the reinstatement application fee, and a meeting with staff from Academic Support. Supporting documents may also be required.

Permission to return is not automatic and is based upon individual circumstances.

*Approved by the Academic Senate, 4/4/17, 2/9/23*

*Editorially revised by the Provost's Committee on Academic Standing, 4/2/20*



## Undergraduate Repeat Course Policy

Undergraduate students may repeat a course, but the following conditions apply:

1. A student may repeat a course in which they have earned a grade of A through E. All grades will appear on the transcript, but only the last grade received will be utilized in computing cumulative hours and GPA.
2. A student may not repeat a course on the CR/NC grading option. A course with an earned letter grade may not be repeated on the CR/NC grading option.
3. If the designator or the course number has changed since the student's previous attempt, the student is encouraged to email the Registrar's Office at [records@cmich.edu](mailto:records@cmich.edu). This will ensure that the repeat will be noted and will be included in the current semester calculations.
4. A student repeating a CMU course at another college/university must earn a higher grade than their original attempt for the course to transfer. Honor points will not transfer but the previous CMU honors points will be removed in computing the average.
5. A course taken after a student graduates will not change the previously attempted grade or credit hours.
6. A student is limited to 3 attempts of a course. This includes repeats where they have earned a grade of A through E, or attempts where they were awarded grades of CR, NC, I, W, Z, or X.
  - a. This limitation does not apply to independent study and similar courses for which course content varies significantly with each offering. (Often these are courses with variable credit hours.)
  - b. For exceptions to this limitation policy, a student may appeal to the Chairperson of the department offering the course.

## Undergraduate Credit/No Credit Policy

An undergraduate student may take courses on a Credit/No Credit basis subject to regulations summarized here. The option is elected by submitting an Undergraduate Credit/No Credit Request form (<https://apps.cmich.edu/tools/workflow/forms/CreditNoCreditRequest>) to the Registrar's Office before the published deadline.

The instructor is not notified when a course is taken credit/no credit and so assigns the student a letter grade. The grade is automatically converted to credit or no credit according to the following guidelines. The student earns credit (CR) for the course and credit toward graduation when a grade of C or better is assigned. No credit (NC) is earned when the assigned grade is C-, D+, D-, or E. The course appears on the student's permanent record with the CR or NC grade, but the grade has no effect on the grade point average.

Departments designate which of their courses may be taken on a credit/no credit basis and whether such credit may be applied to a major or a minor. A department may offer certain courses exclusively on a credit/no credit basis after approval by the appropriate curricular authorities and publication in the University Bulletin.

A maximum of 25 semester hours of credit earned under the credit/no credit option may be applied toward an undergraduate degree. Courses exclusively offered on this basis are not included in the 25-hour restriction. Students may not take more than two courses or 7 hours for credit/no credit in the University Program.

Deadlines for registering for courses on a credit/no credit basis can be found on <https://coureregistration.apps.cmich.edu>. A student who officially elects the credit/no credit option for a course may not revert to a letter grade after the deadline.

Regulations for graduate credit/no credit offerings are to be found in the Graduate Studies Bulletin.

## Non-Degree Courses

Courses numbered (DESIGNATOR) 589 - Professional Development (1-6) do not apply to degree requirements. These courses cover selected issues designed for professional development, in-service training to meet specific staff development needs in education, business/industry, allied health, technology, and other professional settings. They are not applicable to degree requirements.

## Courses of Unspecified Content or Variable Credit

Variable credit courses are identified by a semester hour designation such as 1-3 (Spec). The maximum hours that a student may earn in a variable credit course to apply toward graduation is the highest number in the semester hour designation for the course (i.e., 3 hours maximum in the example listed above).

Unspecified content courses are defined to be courses in which the student or department is not restricted by the course description in the graduate Bulletin to a specific area or subject matter to be included within the course.

It is up to each graduate advisor to ensure that a student's authorized program plan has sufficient university-approved coursework to provide the student with a solid grounding in the academic discipline. In order to assist advisors, a list of variable credit and unspecified content courses is given before the course listings of each department.

## Policy Requiring a Signed Major by Completion of 56 Credit Hours - Main Campus

All students enrolled on the Mt. Pleasant campus are required to declare a major or sign a statement of intent to major by the time they earn 56 hours of credit. Students' records will be reviewed and a registration hold placed on students who have completed 56 hours and have not declared a major or a "statement of intent to major."

## Curriculum and Course Changes

All changes in curriculum and all course substitutions must be approved by the academic advisor. Deviations from the declared program must be amended in Degree Progress by the appropriate academic advisor. Students who take courses which have not been approved by their academic advisor do so at the risk that those courses may not apply to their degree.

Curriculum and course changes may require approval from the Veterans Administration if a student is to continue to be eligible for veterans educational benefits. Students should consult their program administrator.

## Undergraduate Appeal Process

An undergraduate student may request a review of the following through an appeal:

1. Course substitution or other modification of the University Program and competency requirements
2. Individual course transfer
3. Extension of bulletin
4. Graduation or degree requirements

Information concerning filing an appeal is available through the Academic Senate Office located in Park Library.

## Course Substitution and Amendments

Every student is expected to take the required work prescribed for the degree plan the student is following. It is sometimes necessary, however, to make substitutions, especially in the case of students who have not been in attendance for several years or who have transferred from other colleges. The following govern such deviations:

**Degree Substitution.** Substitution for a specific course prescribed on a particular degree, except as noted below, will be processed only when (1) approved by the chairperson of the department offering the course and (2) certified by the chairperson to the Registrar via electronic submission on Degree Progress. No substitution may be made for courses comprising the University Program or competency requirements portions of the student's degree requirements.

**Modification for Major or Minor.** Change of a required or elective course on a declared major or minor will be processed only (1) when approved by the student's departmental advisor, and (2) when certified by the advisor to the Registrar via electronic submission on Degree Progress. The departmental chairperson shall authorize changes in the absence of the departmental advisor.

## Opportunities for the Superior Student

An enriched academic program that can be planned largely by the individual is available to the superior student at Central Michigan University. Numerous special opportunities exist for the student who wishes to enter university study at an advanced level, to move on rapidly to specialized studies, or simply to learn more.

Larzelere Hall, where Honors Program first-year students are strongly encouraged to live, provides a specialized living and learning community for high-ability students.

Financial assistance is provided for many students of outstanding high school and college academic performance by means of Board of Trustees, State of Michigan, and endowed scholarships. Advanced placement earned through College Level Examination Program is another incentive to the academically talented and motivated student. The Honors Program also offers research and study abroad funding.

In addition to recognition upon graduation with high class standing, the University provides many honor societies in the various departments and fields of study.

## Requirements for Athletic Participation

To be eligible for intercollegiate athletic competition, a student athlete must meet all admission and eligibility requirements of this University, the Mid-American Conference, and the National Collegiate Athletic Association. Participation requires that the student athlete be registered for at least 12 semester hours of credit throughout the semester in which the student participates.

## Class Attendance

Upon the assumption that class attendance is a responsibility shared by adults, as teachers and class members, there is no university-wide regulation requiring attendance by students, or requiring the instructor to excuse absences from classes or examination. Individual instructors may establish their own class attendance regulations, but those that they do establish need to be reasonably and fairly applied.

Faculty have the right to consider a student's attendance in class in assigning grades and may lower grades if the student's absence warrants this action. Faculty also may require students to notify them of the cause of an absence, in advance of the absence, if possible. The instructor may choose to guide the student in making up work losses due to absences, if the student requests such assistance. However, this does not obligate faculty to provide such assistance. If a faculty member is unsure about how to provide guidance to a student, the faculty member may seek assistance through the College or Graduate Dean's office or may refer the student to the Office of Student Affairs. The Office of Student Affairs will assist students in notifying instructors for extended absences. This notification is only a courtesy as there is not a campus-wide attendance policy at CMU. See the index for absences related to bereavement situations and for absences due to military service.

## Missed Class Policy

Students are expected to comply with an instructor's established attendance policy, and they should avoid classes where there would be significant absences. In the case of an absence due to required attendance at a university-sponsored event such as a department trip, performing arts activity, ROTC function, or athletic competition, reasonable attempts should be made by faculty members to allow the student to make up missed work. Students are responsible for completing the work assigned or due on the days they are absent for these events. Both the sponsoring unit and the student should inform the faculty member as soon as possible in the semester so arrangements can be made for completing missed assignments or tests. The student is required to provide each instructor with an official notification in advance of the absence (e.g., a letter from the department chair or the coach). Optimally, this would be done by the third week of the semester, at the latest, so that the necessary arrangements for missed work can be made well in advance.

## Accommodation of Religious Obligations

It is Central Michigan University policy to permit students to be absent from classes or examinations for reason of observing religious holidays. Students are allowed to make up course requirements when they are unable to avoid a conflict between their academic and their religious obligations. Absence from classes or examinations caused by observing religious holidays does not relieve students from responsibility for any part of the coursework required during the period of absence. It is the obligation of students to provide faculty with written notice of the religious holiday they will be observing and the date on which they will be absent at least two weeks prior to the date of the religious holiday. Students who miss classes or are absent on days of examinations or class assignments shall be offered an opportunity to make up the work, without penalty, unless it can be demonstrated that a makeup opportunity would interfere unreasonably with the delivery of the course. Should disagreement arise over any aspect of this policy, the parties involved should contact the department chair, the dean of the College or the Ombuds Office. Final appeals will be resolved by the Provost.

## Student Bereavement Policy

**Policy.** It is the policy of CMU to allow appropriate support to students in the event of a death of a student's loved one, including but not limited to time off and other support as defined in the Procedure included below.

**Procedure.** As soon as practicable after learning of the death of a family member, students should notify the Office of Student Affairs (989-774-3346, or [studentaffairs@cmich.edu](mailto:studentaffairs@cmich.edu)) of the passing. It is important that documentation of the passing (e.g., obituary; service card) is sent to the Office of Student Affairs as soon as possible following the death. The Office of Student Affairs will determine the sufficiency of the submitted documentation and retains the right to request additional documentation if it deems the original documentation insufficient. This information will be kept on file in the event that faculty or university personnel request verification. This is intended to eliminate the need for individual faculty to request and require verification of the event giving rise to the bereavement from the grieving student. The Office of Student Affairs will then notify appropriate members of the faculty of the absence via e-mail.

Students are given up to three (3) consecutive calendar days off to attend funeral and/or memorial services and to provide support to family members. If additional days are needed, due to travel or other reasons, that information must be provided in the initial report to the Office of Student Affairs. Approval for additional days (if necessary) will be granted (or denied) by the Associate Vice President for Student Affairs and adjusted when the notice is sent to faculty. The adjusted amount of approved leave (if any) shall be communicated to appropriate faculty members at the time the notice is sent.

Students are expected to stay in contact with the appropriate faculty members to ascertain how the opportunity for equivalent credit will be determined for missed course assignments. Such determinations shall be at the sole discretion of the faculty member, but shall be reasonable when considering the circumstances of each leave. The Provost, working with the Vice President for Enrollment and Student Services will resolve any disputes arising from an allegation that a faculty member's determination of a bereavement accommodation is unreasonable.

All missed course assignments shall be eligible to be made up and include, but are not limited to: exams, quizzes, presentations, and other required assignments. Once again, ongoing communication with appropriate faculty is very important during this time. Failure of a student to maintain adequate communication with the faculty may result in a failing grade for any or all course assignments missed as a result of leave granted pursuant to this Policy.

For a full copy of this policy (including procedures for faculty and information on available counseling), see *Policy 3-40* on the General Counsel website, [https://www.cmich.edu/office\\_president/general\\_counsel/Pages/default.aspx](https://www.cmich.edu/office_president/general_counsel/Pages/default.aspx) (10/16/16)

(continued)

## Student Short-Term Military Service Policy

See the Index for page number.

## Academic Dishonesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. Written or other work that a student submits must be the product of the student's own efforts. Plagiarism, cheating and other forms of academic dishonesty, including dishonesty involving computer technology, are prohibited.

In cases involving academic dishonesty, the determination of the grade shall be left solely to the discretion of the instructor. In a case where the instructor judges a student guilty of academic dishonesty, the instructor is encouraged to report the incident of dishonesty to the director of the Office of Student Conduct in order to discern potential patterns of egregious dishonesty. For a full copy of the Policy on Academic Integrity, see Appendix II in this Bulletin.

## Misrepresentation of Affiliation with the University

It is important to Central Michigan University, its students and alumni that academic and cocurricular work done by students while at the university be accurately and honestly presented. When individuals report their academic performance and/or involvement in university related activities it is expected that they will do so in a truthful manner. Anyone involved in misrepresentation of student coursework, grades, degrees earned and/or involvement with cocurricular organizations or other university related activities may be barred from future enrollment and/or graduation from Central Michigan University. Such activity may also be criminal and subject the person to prosecution.

## Official Transcript Requests

Any current or former student who does not have a financial hold may request an Official Transcript from Central Michigan University.

**How to Request a Transcript.** Central Michigan University has partnered with the National Student Clearinghouse (NSC) to provide online ordering for CMU transcripts. This partnership allows students to order transcripts 24 hours a day, seven days a week and track their orders via text message or e-mail. Transcripts ordered through the NSC are typically sent to a recipient within one hour, though it could take up to 1-2 business days if your record requires manual processing (students who attended CMU prior to 2000). The NSC is the only method through which students may request CMU transcripts.

All transcript ordering will take place through the NSC's website. Electronic transcripts sent directly from the NSC to another educational institution, employer, etc. will be considered official. In order to request an unofficial transcript, one simply needs to have the transcript sent directly to their e-mail address.

Electronic transcripts are the preferred method of transcript transmission between institutions. Students will find that the process is much more efficient and effective than ordering traditional paper-based transcripts. The ordering process begins on the Registrar's Office's website at <https://www.cmich.edu/offices-departments/registrar-office>.

Any current or former student who does not have financial holds may request a Central Michigan University transcript.

## Foreign Language Placement/ Retroactive Credit

Students who have had French, German or Spanish in high school and want to continue the study of that language at CMU are eligible for Retroactive Credit. In order to qualify, students must take the language Placement Test found at [class.cmich.edu/WLC](http://class.cmich.edu/WLC).

Students who take the placement exam and complete their first language course at the 102 level or higher with a grade of B (3.0) or better are eligible for up to 8 hours of retroactive credit. See the table below. To qualify, this must be the student's first college-level course in this language. Earned credits count toward the University Program Subgroup IV-B. Retroactive credits do not count toward the University Program, but they do count toward the degree and toward some language majors and minors.

Foreign Language Placement/ Retroactive Credit				
Student places in	Student enrolls in	Student earns retroactive credit for	Total credits earned Retro + enrolled =	UP equivalency
101 or 102	101	NA	0 + 4 = 4	IV-B
102	102	101 (4)	4 + 4 = 8	IV-B
201	102	101 (4)	4 + 4 = 8	IV-B
201	201	101 (4) + 102 (4)	8 + 4 = 12	IV-B
202	201	101 (4) + 102 (4)	8 + 4 = 12	IV-B
202	202	102 (4) + 201 (4)	8 + 4 = 12	IV-B
3xx level	FRN 300-level course GER 311 or 312 SPN 331 or 341	201 (4) + 202 (3*- or 4)	8 + 3* or 4 = 11 or 12	IV-B
* SPN 202 = 3 cr				

## Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act of 1974 (FERPA) affords students certain rights with respect to their educational records. They are:

1. The right to inspect and review the student's educational records within 45 days of the date the University receives a request for access.

Students should submit to the Registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student's educational records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights.

Students may ask the University to amend a record they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identifying the part of the record they want changed, and specify why it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of their right to a hearing regarding the request for amendment. Additional information regarding the hearing procedure will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student's educational records, except to the extent that FERPA authorizes disclosures without consent.

One exception which permits disclosure without consent is disclosure to University officials with legitimate educational interest and/or needs to review an educational record in order to fulfill their professional responsibility. A University official for the purpose of this policy is defined as follows:

- members of the faculty;
- members of the professional, executive, and administrative staff;
- members of the Central Michigan University Police Department in an emergency if knowledge of the information is needed to protect the health and safety of the student
- students, when properly appointed as members of a hearing panel or screening committee;
- representatives of the State Auditor General and Department of Education when performing their legal function;
- a person or company with whom the University has contracted (e.g. attorney, auditor, or collection agent) but limited to only the specific student information needed to fulfill their contract;
- others as designated in writing by the President, a university vice president, or dean.

Upon request, the University discloses educational records without a student's consent to officials of another school in which a student seeks to enroll.

Another exception which permits disclosure without consent is when the information consists solely of "Directory Information." Directory information may be published or released by University faculty and staff at their discretion. Unless a student specifically directs otherwise, as explained more fully in paragraph (4) below, Central Michigan University designates all of the following categories of information about its students as "Directory Information":

- a. name, campus address, home address, telephone listing, and campus e-mail;
- b. state of residence;
- c. age, date, and place of birth;

- d. major field of study, including the college, department, or program in which the student is enrolled;
- e. classification as a freshman, sophomore, junior, senior, graduate, specialist or doctoral student;
- f. enrollment status (full-time, half-time, less than half-time);
- g. participation in officially recognized activities and sports;
- h. weight and height of members of athletic teams;
- i. dates of attendance and graduation, and degrees received;
- j. the most recent educational institution attended;
- k. honors and awards received, including selection to the Dean's or President's list, honorary organization, or the GPA range for the selection.

- l. image or likeness of a student if captured during a Central Michigan University sponsored event, activities or public events held on any Central Michigan University campus location

4. A student has the right to refuse the designation of all categories of personally identifiable information listed above (a. through k.) as Directory Information. Due to the public nature of item (l), removal of the image or likeness of the student may not be feasible. If a student exercises this right, it will mean that no Directory Information pertaining to the student will be published or otherwise released to third parties without consent, a court order, or a subpoena.

Any student wishing to exercise this right must inform the Registrar's Office in writing by the end of Phase II registration regarding the withholding of all categories of personally identifiable information with respect to that student. Once a student has requested the withholding of information, "Directory Information" will be withheld until the student cancels the request in writing.

5. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Central Michigan University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

### Family Policy Compliance Office

U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, DC 20202-5901

## Student Records

### Access to Records

University policy grants students access to their education records under conditions which conform to the Family Educational Rights and Privacy Act of 1974 as amended and regulated by the appropriate federal guidelines.

Directory information may be published or released by the university unless a student informs the Registrar's Office in writing that any or all items should not be released without the student's prior consent. Directory information is defined to include such items as a student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height (of members of athletic teams), dates of attendance, degrees and awards received, and the previous educational institution attended by the student. Any current or former student who does not have financial holds may request a Central Michigan University transcript.

Official student records are maintained on the campus in Mount Pleasant, Michigan. Permanent records or transcripts are maintained on all individuals who earn credit at Central Michigan University. These permanent records are maintained by the Registrar of Central Michigan University.

Records of applications and correspondence regarding admission, academic transcripts from other institutions, transfer credit, prior learning, graduation, and other academic issues are maintained on CMU's main campus. See admissions section for information on inactive and no-show students.



## Withdrawing from a Class After Drop/Add Period

1. Students are allowed to withdraw from an individual course using CentralLink if they do so before the published deadline. The student will receive an e-mail that the withdrawal has been received by the Registrar's Office. There is no refund for an individual course withdrawal for an on-campus course.
2. At the time of the withdrawal, the student will be asked to indicate a reason for withdrawal and indicate their attendance in the course (never attended or the last date attended).
3. Students will receive W grades as an indicator of withdrawal through the tenth week of the Fall or Spring semester or through the midpoint of all courses shorter than one semester. No individual course may be withdrawn after this time.
4. Faculty will receive an e-mail regarding the withdrawal and the attendance reported by the student. The instructor will notify the Registrar's Office if he/she shows a different attendance period than reported by the student. Also, in cases involving academic dishonesty, the instructor will notify the Registrar's Office and the course will be reinstated. The final grade determination shall be left to the discretion of the instructor.
5. Under unusual circumstances, a student may appeal to the Registrar for exceptions to this policy. If a waiver is approved, the Registrar's Office shall notify the instructor of this action.

**Note: Effective Spring 2024:** A non-refundable \$50 withdrawal fee for each course will be assessed.

## Withdrawals from all Classes (Complete Semester Withdrawals)

### Student Initiated Withdrawals

Students may withdraw from all courses through the 10th week of classes using the complete withdrawal functionality in Course Search and Registration on *CentralLink*. Students enrolled in short term courses, on-line courses, or have already withdrawn from a single course will be referred to the Registrar's Office for assistance.

A student will automatically receive W's as an indicator of withdrawal through the tenth week of the Fall and Spring semesters or through the midpoint of all courses shorter than one semester. The instructor will be notified of the course withdrawal. In cases of academic dishonesty, the instructor will notify the Registrar's Office to reinstate the course and the instructor will submit the final grade. Summer complete semester withdrawals must be initiated with the assistance of the Registrar's Office.

Students withdrawing from the university between the 10th week and the Friday of the 14th week of the semester must contact the Registrar's office. W's will be assigned for passing work of D- or better and E's for failing work. During this period, students enrolled in a CR/NC only course will receive W's for passing work of C or better and a grade of E (which is converted to NC) for failing work. The Registrar's Office will contact each instructor to verify whether or not the student is earning a passing grade.

No student may withdraw from all classes during the week preceding final examination week.

A student following the above procedures may receive certain refunds, if eligible, in accordance with university regulations.

A student leaving the university without officially withdrawing will not be eligible for refunds and will not be eligible for a W grade.

**Note: Effective Spring 2024:** A non-refundable \$50 withdrawal fee for each course will be assessed.

## Involuntary Withdrawal

Students who are dismissed for administrative or disciplinary reasons or students who owe past due amounts may be subject to involuntary withdrawal from classes and will receive a "W" for each class as an indicator of withdrawal. In addition, students living in residence halls with a past due balance may have their meals and long distance telephone privileges discontinued until their accounts are brought to a current status. Any delinquencies in the Family Housing Apartments may result in the initiation of eviction proceedings.

University staff will counsel students who:

- a. engage or threaten to engage in behavior that poses a danger of causing physical harm to self or others, or
- b. engage or threaten to engage in behavior that would cause significant property damage, or directly and substantially impede the lawful activities of others.

In situations a. and b. above, the Associate Vice President for Student Affairs or designee may refer a student to the Behavior Evaluation Team to assist the student in functioning effectively within the university environment. Referral to the Behavioral Evaluation Team does not preclude removal from the university, or university housing, in accordance with provisions of the Code of Student Rights, Responsibilities and Disciplinary Procedures and/or the Housing Agreement. A student referred to the Behavioral Evaluation Team shall be notified in writing, and shall be provided written information on the procedures to follow.

## Withdrawal To Enter Military Service

A graduate or undergraduate student who is drafted or recalled to military service after previous active duty may be entitled to receive (a) credit for the semester, (b) refund of fees, or (c) partial credit and partial refund, according to the following conditions:

1. The student who is unable to complete the first half of a session shall be entitled to a full refund of fees.
2. The student who has completed the first half or more of a given session may receive credit or partial credit and proportional refund of fees.

The student shall apply at the Registrar's Office for confirmation of the student's eligibility to receive credit. The Registrar shall advise the student concerning withdrawal, refund, or credit procedures.

If the Registrar confirms eligibility for credit, the student may present the confirmation to the appropriate academic dean. The academic dean, the chairperson of the department in which the student is enrolled, and the instructor of the class shall determine the amount of credit which has been earned. The academic dean reports the amount which has been earned, in writing, to the Registrar and the instructor shall submit the appropriate grade at the end of the semester.

Students who enlist or volunteer for military service during the session must withdraw from the university according to regular withdrawal and refund procedures.

## Offset Policy

During the 10th through the 25th calendar day from the official start date of a semester, students are permitted to offset equal credits and course fees with recommendation of academic advisors and academic department chairs. Students must meet all the academic standards for the new course or have an approved exception. For credits or fees added in excess of credits dropped, additional tuition and fees must be paid. Likewise, any offset resulting in a lower tuition and fee charge will be credited to the student's account if applicable.

During the Offset period, grades of "W" will not be assigned to courses dropped through the offset process. Students are unable to withdraw from an Offset course for a refund unless specified or granted via a Drop/Withdrawal Appeal being granted. Note, books and supplies purchased for the course the student is leaving in Offset may not be eligible for return or refunds. Offset cannot be done between semesters. Financial aid recipients considering an offset should check with the Scholarships and Financial Aid office or other applicable office, such as Veterans Resource Center, prior to submitting an Offset request. Offsets must be processed via the Registrar's office.

## CMU Online Courses

Online course delivery provides each student with a virtual classroom where lectures, multimedia study materials and class discussion are all provided using the latest technology. Interactive online tools offer students the opportunity to connect with faculty and peers to discuss course content. Online courses still have specific start and end dates and assignment/exam due dates. Careful review of the course syllabus prior to the enrollment of a course will provide these dates. Questions regarding online courses should be directed to staff at [cmuonline@cmich.edu](mailto:cmuonline@cmich.edu) or 989-774-4371.

Courses offered through CMU Online mirror main campus face-to-face courses in terms of their scope, study requirements and level of difficulty. Most students limit themselves to two online courses per term, especially if a student is new to independent learning, is employed full time, or has a large semester class load.

### Online Learning Environment

To ensure success in online classes, CMU encourages students to familiarize themselves with the online learning environment prior to enrolling in CMU Online courses. Preview a sample online class, run a diagnostics check on your computer and take the Online Learning Assessment on our website at: <https://www.cmich.edu/academics/innovation-online/cmu-online>.

### Drop and Withdrawal Policy for Online Courses

All CMU Online courses start on a Monday and end on a Friday. Students are encouraged to frequently and consistently log into their online course, ideally every day. Tuition refunds requested prior to the start date of the course shall be made in full. The start time for CMU Online courses is 12:01 a.m. on the first day of class. Drop/withdrawal requests received after that will be assessed a \$50 fee. The amount of tuition refunded is based on the week the request is received within. Holidays do not have any effect on this definition of a week. Students may not withdraw after the midpoint of the course.

Students who cease/fail to attend (virtual or otherwise) and have not formally withdrawn from the course will receive a grade of "E." A charge-back for financial aid may be incurred based on student's last date of academic participation in the class. See the *Scholarships and Financial Aid* section of this Bulletin for additional information.

### Examination Proctors

A proctor is a person approved to administer exams to a student for an online course requiring a proctor. Not all online courses require a proctor. For those courses that do require a proctor, students must identify a proctor and provide the necessary information through the Proctor Designation Form for approval. Once a proctor has been approved, CMU will provide exam materials to the proctor. The student arranges for an exam appointment with the proctor to take their exam.

Acceptable proctors include school counselors, school/college administrators/teachers, military/industry education or testing centers, or librarians at a local library. In addition, CMU centers proctor exams. Unacceptable proctors include, but are not limited to, family members, friends, co-workers, other CMU students, anyone with whom the student has a personal relationship, or anyone who cannot provide a suitable testing environment. CMU reserves the right to deny any proctor or assign proctors to students as deemed necessary. More information on proctoring can be found at: <https://www.cmich.edu/academics/certified-testing-center/proctored-exams-for-cmu-courses/identifying-and-designating-a-proctor>.

The student is responsible for any proctor's fees. If one of the CMU centers is to be used as a proctor, please check with that center to determine available times and dates for testing. Should you have any questions, call 989-774-4461.

## CMU Online Information

### Classes and Seminars

Classes are usually scheduled during compressed time blocks to maximize degree progression and to minimize scheduling conflicts. Course modality options include face-to-face classes, online, hyflex, or hybrid courses.

**Online Asynchronous:** Online asynchronous courses are completely online with no required meeting days and times, but may offer optional synchronous meetings. All formalized instruction and coursework are completed online. Students will complete assignments by established deadlines. Proctored or monitored exams may be required.

**Online Synchronous:** Online synchronous courses are completely online with required specific meeting days and times where students are expected to be actively engaged in a virtual setting. All formalized instruction and coursework are completed online. Proctored or monitored exams may be required.

**Face-to-Face:** Face-to-face courses meet in a CMU approved location with required specific meeting days, times, and location as noted in the course registration system. Internet-based and other technology may be used to enhance instruction in and outside of class. Proctored or monitored exams may be required.

**Hybrid:** Hybrid courses have required specific meeting days and times outlined in the course registration system and require face-to-face class sessions in a CMU approved location while other required class sessions can be a mixture of synchronous online meetings and asynchronous online activity. Instructors will determine which class sessions will be held in which modality within the specified course day and time range and these will be announced in the course syllabus. Proctored or monitored exams may be required.

**HyFlex:** HyFlex courses meet on specific days and times simultaneously face-to-face and synchronously online. Course meeting dates, times, and location(s) are noted in the course registration system, and face-to-face meetings occur in a CMU approved location. Students can change their mode of attendance freely according to their need or preference. At the instructor's discretion, access to course content may be available online asynchronously. Proctored or monitored exams may be required.

Regardless of modality, all courses have specific start and end dates. In addition, textbooks, course outlines, reference materials and assignments are available prior to the first session of a class to allow preparatory reading and study.

**Note:** To ensure the best student learning experience and the availability of courses that fulfill student degree plans, courses initially scheduled as face-to-face courses may be converted to a hybrid/blended course format prior to the first class meeting.

### Main Campus Courses for CMU Online Students

Any student admitted to CMU Online may enroll for classes on the Central Michigan University campus in Mount Pleasant. Students must follow regular main campus enrollment procedures. Information regarding dates and procedures for main campus registration is on the Registrar's website at <https://www.cmich.edu/offices-departments/registrar-office>.

## Independent Study

Independent study courses are available for students who wish to pursue special areas of interest. Independent learning experiences should help students develop skills in planning, organizing, researching, reporting, and developing specific skills outside the classroom. The experiences may take the form of readings, research, or special projects. Students wishing to pursue independent study should contact their advisor for an Independent Study Guide and an application for Independent Study Request. Independent study projects should not duplicate the content of an established course.

## Tutorial Option

Students may, under certain circumstances, take courses as tutorials (on an individual basis) working closely with an approved instructor. Details are available from the program administrator.

## CMU Online

Students interested in taking courses through CMU Online must be admitted to Central Michigan University prior to registration. Those students applying veterans educational benefits toward tuition of a course should contact CMU's Veterans' Resource Center for information regarding certification and restrictions.

Courses offered through CMU Online mirror main campus face-to-face courses in terms of their scope, study requirements and level of difficulty. Most students limit themselves to two online courses per term, especially if a student is new to independent learning, is employed full time, or has a large semester class load.

Online course delivery provides each student with a virtual classroom where lectures, multimedia study materials and class discussion are all provided using the latest technology, over the internet. Interactive online tools offer students the opportunity to connect with faculty and peers to discuss course content in cyberspace. Online courses still have specific start and end dates and assignment/exam due dates. Careful review of the course syllabus prior to the enrollment of a course will provide these dates. Questions regarding online courses may be directed to staff at [cmuonline@cmich.edu](mailto:cmuonline@cmich.edu).

## Planned Experiences

The planned experiences credit option provides a flexible learning format which can be tailored to fit particular student objectives. This learning option also allows the student to take full advantage of all instructional resources available. The student should consult their academic advisor to develop a planned experience and should consider the following guidelines:

1. The experience must develop skills not previously acquired by the student.
2. Planned experience credit will not be granted for work or study in which the student was involved prior to enrolling in the planned experience.
3. The experience may be graded on a credit/no credit basis at the student's request and with the faculty reviewer's approval.
4. The student may earn no more than 30 semester hours of credit through planned experiences. No more than 15 semester hours of credit may be earned for a single planned experience.

The following course numbers and titles are used to record credit granted for planned experiences:

CDE 291 Planned Experience in Community Development (1-15)

CDE 491 Planned Experience in Community Development (1-15)

## Academic Policy and Federal Student Aid

A student's Grade Point Average (GPA), their completion of coursework and timeframe standards (duration of completion) are measured each semester for the purpose of Satisfactory Academic Progress (SAP). Failure to maintain Financial Aid Standards will affect Federal Student Aid eligibility. Details concerning SAP can be found at: [https://www.cmich.edu/ess/OSFA/Pages/Satisfactory\\_Academic\\_Progress.aspx](https://www.cmich.edu/ess/OSFA/Pages/Satisfactory_Academic_Progress.aspx).

# Options for Earning Credit «

## Undergraduate Transfer Credit Policy

- I. **Transfers from Accredited Schools and Foreign Institutions.** Undergraduate courses from another college or university that is recognized as associate or baccalaureate degree granting by institutional accrediting associations or from a foreign university or college approved by the government or the official regulating agency of the country in which the university or college is located will be considered for transfer credit at Central Michigan University, subject to the following conditions: a.) Courses must be germane to a program at Central Michigan University, b.) Transferable courses completed with a grade of C- or better or the equivalent will be accepted. For credit from institutions that have numeric grading only, you may contact the Registrar's Office (989-774-3261) to verify the minimum grade required for transfer, c.) Credits from foreign institutions must first be evaluated by an approved international credential evaluation organization. d.) Grades and honor or quality points are not transferable to or recorded on the CMU permanent record, e.) Acceptability of transfer coursework to fulfill CMU major or minor requirements is at the discretion of the individual department.
- II. **Transfers from Non-Accredited Schools.** A student who has earned credit or a baccalaureate degree from an institution that is not accredited may appeal through the Board of Appeals who may consult with the individual departments for an exception to the above policy for up to a maximum of 60 credits. Before accepting such credit for transfer credit consideration, the Board of Appeals will consult with the individual departments. If a positive decision results, transfer credit may then be granted subject to the same conditions that apply to transfers from accredited schools.
- III. **MACRAO/MTA Transfer Agreements, Out-of-State Statewide Equivalency Agreements, and Associate Degrees.** A person who transfers from another accredited institution within the United States with a transcript which documents as having satisfied the MACRAO or MTA Agreement, or a statewide transfer agreement, or completed an Associate of Arts or Associate of Science, or completed an Associate Degree in an applied or professional discipline (disciplines must be germane to a program at CMU), will also have satisfied the University Program portion of the General Education Requirements section at CMU. All other students may refer to the General Education Requirements in this Bulletin for guidelines on the applicability of their transfer credit toward University Program requirements. (*Academic Senate, 4/7/20*)
- IV. **International Baccalaureate Credit.** Courses within the International Baccalaureate Diploma and the International Baccalaureate Certificate for individual courses may be accepted as transfer credit on a course by course basis if the higher level examinations have been passed with a score of four or better.
- V. **Military Training and Experience.**
  - A. *Military Service School Experiences.* Granting of academic credit for military service school experiences will be guided by the evaluations prepared by the American Council of Education and published in the "Guide to the Evaluation of Educational Experiences in the Armed Services." All Military Service School experiences that are recommended for undergraduate level credit will transfer to Central Michigan University. Acceptability of credit for military service school experiences to fulfill CMU major or minor requirements is at the discretion of the individual department.
  - B. *Military Occupational Specialties.* Granting of academic credit for military occupational specialties will be guided by the evaluations prepared by the American Council of Education and published in the "Guide to the Evaluation of Educational Experiences in the Armed Services." All Military Occupational Specialties that are recommended for undergraduate level credit and are germane to CMU will transfer to Central Michigan University. Acceptability of credit for military occupational specialties to fulfill CMU major or minor requirements is at the discretion of the individual department. To be considered for transfer credit student must provide an official Joint Service Transcript (JST) with the American Council of Education (ACE) Recommendation. CMU follows the ACE Recommendations as it relates to military experience and training; to be considered for transfer, students should provide official transcripts or official documentation that includes an ACE Recommendation.
  - C. *DANTES Subject Standardized Tests (DSST).* Central Michigan University accepts a number of the DSST exams for transfer credit based on the recommendations provided by the American Council of Education (ACE). Acceptability of credit for military service school experiences to fulfill CMU major or minor requirements is at the discretion of the individual department. Please contact [registrar@cmich.edu](mailto:registrar@cmich.edu) with any questions.
- VI. **Non-military Training Experiences.** Granting of academic credit for selected training experiences offered outside the sponsorship of colleges and universities will be guided by the evaluations prepared by the American Council on Education's PONSI program (ACE/PONSI). ACE/PONSI credit recommendations appear in the publication entitled *The National Guide to Educational Credit for Training Programs*.
- VII. **13th Year Credit.** CMU will allow a student's 13th year (e.g., the German Abitur) or A-level credit from non-U.S. academic systems to count as undergraduate credit if it is approved by the department responsible for that area (e.g., Biology would have to approve credit for courses taken that relate to biology). Such approval must be done on a case-by-case basis. The student must submit course syllabi, including information as to textbooks used in the course, so that the department can determine whether to approve such credit. Progress of students who receive this credit will be monitored in order to determine the efficacy of this policy.



## Credit by Examination

A regularly matriculated student who has had experience or background comparable to a course at this university may file for Credit by Examination in a specific CMU course under the following conditions:

1. No credit transferable to CMU has been earned in the course requested by examination.
2. No advanced placement had been given for the course requested by examination.
3. No higher level course in that subject area was taken prior to requesting credit by examination.
4. Credit by examination may not be used to repeat any course previously taken, either to remove a failure or to improve a grade, as provided in the Repeat Course Policy.
5. Credit by Examination is not available by Credit/No Credit Option. The only class where Credit/No Credit is a valid grade by exam is a class that is only offered on the CR/NC basis.

*Credit by Examination* forms are available in the Registrar's Office, Warriner Hall. The form is then to be submitted to the appropriate department chairperson. If the department chairperson approves the course for credit by examination, an instructor will be assigned to give the examination and the student will be directed to pay for the course and submit the approved form to the Registrar's Office.

Credit by Examination when graded carries point values as do other courses. Credit by Examination in courses offered only on the CR/NC basis do not carry point values and count only as earned hours. Semester hours earned by Credit by Examination do not apply to meet any of the hours required for residence credit.

## Prior Learning Assessment Credit

Students may apply for credit for past personal and professional experiences that have resulted in the attainment of college-level competencies. Academic credit may be awarded for learning resulting from career and personal experiences; job-related activities; extensive hobbies, travel and foreign residency; community service; and training received through on-the-job instruction, self-study, or specialized schooling. To be applied to a degree plan, prior learning must be directly related to the degree being pursued. Credit from prior learning may not be used to meet any University Program or Competency requirement.

Most main campus majors will not accept prior learning credit to meet requirements. For more information, consult with faculty major advisors regarding prior learning.

## Advanced Standing

Undergraduate students may be granted credit at CMU by earning high scores on the following specified examinations: Advanced Placement (AP), College Level Examination Program (CLEP), and International Baccalaureate. See the following pages.

### Accepted Advanced Placement Program Examinations

Undergraduate students may be granted credit at CMU by earning the Minimum Score Required on specified exams listed in the table below. The courses on this list are approved by individual academic departments and are subject to change. To have Advanced Placement credit granted at CMU, you must have College Board send your exam results to Central Michigan University.

Name of Examination	CMU Equivalent	Course Number	Credit	Min. Score Required	UP Group
African American Studies	African American Politics	PSC 125	3	3	IV-C
Art: History of Art	Introduction to Western Art, Part I	ART 283	3	3	I-A
Art: Drawing	Introduction to Drawing	ART 106	3	3	
Art: 2-D Art and Design & Art: 3-D Art and Design	Design Foundations	ART 119	3	3	
Biology	General Biology Foundations of Cell Biology	BIO 101 BIO 112	3 4	3 4	II-A -
Chemistry	Survey of Chemistry & Introductory Chemistry Laboratory	CHM 120 & CHM 127	4 1	3*	II-B
	General Chemistry I & General Chemistry II	CHM 131 & CHM 132	4 4	4	II-B
Computer Science A	Principles of Computer Programming	CPS 180	3	3	II-B
Computer Science Principles	A First Byte of Computer Science	CPS 101	3	3	II-A
English Language & Composition	Freshman Composition	ENG 101	3	4	Competency
English Literature & Composition	Introduction to Literature	ENG 134	3	4	I-B
Environmental Science	Of Earth and Us: Introduction to Environmental Science ENS Credit	ENS 101QR	3 3	5 3 or 4	II-B
French Language	Credit will be allowed as follows: • For a score of 3, credit will be given for FRN 101 and FRN 102 (8 hours) • For a score of 4, credit will be given for FRN 102 and FRN 201 courses (8 hours) • For a score of 5, credit will be awarded as follows by language: FRN 102, FRN 201 and FRN 202 (11 hours)				IV-B
German Language	Credit will be allowed as follows: • For a score of 3, credit will be given for GER 102 and GER 201 courses (8 hours) • For a score of 4, credit will be given for GER 201 and GER 202 courses (8 hours) • For a score of 5, credit will be awarded as follows by language: GER 201, GER 202 and GER 311** (11 hours) **GER 312 credit can be obtained on request.				IV-B
Government & Politics: U.S.	Introduction to American Government & Politics	PSC 105	3	3	III-B
Government & Politics: Comparative	Introduction to Comparative Politics	PSC 242	3	3	III-B
History: European	• The Development of Western Civilization: From Ancient Times to 1700 A.D. • Development of Western Civilization: From 1700 to the Present	HST 101 or HST 102	3	3	I-A
		HST 101/HST 102	6	4 or 5	
History: U.S.	• The Quest for Liberty: The United States to 1865 • The Struggle for Equality: United States, 1865-present	HST 111 or HST 112 HST 111/112	3 6	3 4 or 5	III-B
History: World	World History to 1500 World History since 1400	HST 201 or 202	3	3	
		HST 201 and 202	6	4 or 5	
Human Geography	Human Geography and Globalization	GEO 121	3	3	III-B
Japanese Language & Culture	Japanese, Elementary I & II	JPN 101 and 102	8	3	
	Japanese, Elementary II & Intermediate I	JPN 102 and 201	8	4	
	Japanese, Elementary II, Intermediate I & II	JPN 102, 201 & 202	12	5	IV-B
Latin	• For a score of 3, credit will be given for LAT 101 and 102 (8 hours) • For a score of 4, credit will be given for LAT 102 and 201 (8 hours) • For a score of 5, credit will be given for LAT 201 and 202 (8 hours)				IV-B for 101
Macroeconomics	Principles of Macroeconomics or Principles of Macro- and Global Economics	ECO 201	3	4	III-B
Microeconomics	Principles of Microeconomics	ECO 202	3	4	III-B
Mathematics: Calculus AB	Calculus I	MTH 132	4	3	II-B and Math
Mathematics: Calculus BC	Calculus I and Calculus II	MTH 132/133	8	3	II-B (for 132) and Math

(continued)

Name of Examination (continued)	CMU Equivalent	Course Number	Credit	Min. Score Required	UP Group
Mathematics: Calculus BC	Subscore AB	MTH 132	4	3	II-B
Physics I	College Physics I College Physics Laboratory I	PHY 130QR PHY 170	4 1	3	II-B
Physics II	College Physics II College Physics Laboratory II	PHY 131 PHY 171	4 1	3	
Physics C (Mechanics)	University Physics I	PHY 145QR	4	3	
Physics C (Electricity & Magnetism)	University Physics II	PHY 146	4	3	
Psychology	Introduction to Psychology	PSY 100	3	3	III-A
Spanish Language	Credit will be allowed as follows: • For a score of 3, credit will be given for SPN 102 and SPN 201 (8 hours) • For a score of 4, credit will be given in the SPN 201 and SPN 202 (8 hours) • For a score of 5, credit will be awarded as follows by language: SPN 201, SPN 202 and SPN 341 (10 hours)				IV-B
Statistics	• Introduction to Statistics • Elementary Statistical Analysis	STA 282QR STA 382QR	3 3	3 4	Math Math and II-B

## College-Level Examination Program (CLEP)

The College Level Examination Program (CLEP) sponsored by the College Board affords students and prospective students the opportunity to demonstrate their academic proficiency at the freshman-sophomore college level in various general areas and in specific subjects.

Policies concerning the use of CLEP General Examinations at Central Michigan University are developed and controlled by the Academic Senate. The minimum scores for CLEP Subject Examinations are determined by the department authorizing credit for the subject.

Options for testing can be obtained from the Certified Testing Center at 989-774-1092 or [https://www.cmich.edu/office\\_provost/CIS/Testing-Center/Pages/default.aspx](https://www.cmich.edu/office_provost/CIS/Testing-Center/Pages/default.aspx).

When a student submits evidence of achievement by CLEP, this evidence will be evaluated by the Registrar's Office with credit being granted in appropriate areas.

- A. To be eligible for credit for CLEP scores, a student must have been granted regular undergraduate admission at CMU and an official score report must be on file.
- B. The student may not at any time have been enrolled in the course for which credit is being sought nor in a higher-level course in the same subject. A student is not considered to have been enrolled in a course if they have dropped the course during the regular drop/add period at the beginning of the semester.

C. \*Credit for the CLEP General Examinations in Humanities and/or Social Science and History will not be granted after university study has begun. In addition, credit earned through CLEP General examinations may not be applied to any University program group requirements. Exceptions: Students with concurrent high school and CMU enrollments or students who have participated in certain special vocationally oriented programs may be eligible to take these examinations. Eligibility in individual cases will be determined by the Registrar's Office.

D. Students may receive three (3) credit hours in ENG 101 for the CLEP College Composition Examination only if that examination is taken before the end of their first college semester. Transfer students may take this examination during their first semester at CMU to meet the Basic Freshman Composition requirement, but no credit will be awarded. Students who have completed or are enrolled in English literature courses are still eligible to earn CLEP credit for ENG 101 since literature and composition courses are different areas of study.

E. CLEP examination credit may not be used to repeat any course(s) previously taken.

F. Grades for the CLEP examinations, where credit is granted, will be recorded as Credit (CR) without points.

In the following list, each approved CLEP subject examination is paired with the CMU course in which credit is granted for a score at the 50th percentile or higher.

College Level Examination Program (CLEP)						
Name of Examination	CMU Equivalent	Course Number	Credit	Score Required	UP/Comp. Equivalent	
American Government	Introduction to American Government & Politics	PSC 105	3	50	III-B	
Analyzing & Interpreting Literature	Introduction to Literature	ENG 134	3	50	I-B	
Biology	General Biology	BIO 101	3	50	II-A	
Calculus	Calculus I	MTH 132	4	50	II-B and Math	
Chemistry	General Chemistry I	CHM 131	4	50	II-B	
	General Chemistry II	CHM 131 & 132	8	61		
College Algebra	College Algebra	MTH 107	3	50	Math	
College Composition	Freshman Composition	ENG 101	3	50	English I	
English Literature	English Literature	ENG 235 & 236	6	49	I-A	
French Language	Elementary French I	FRN 101	4	48	IV-B	
	Elementary French II	FRN 101 and 102	8	52		
	Intermediate French I	FRN 102 and 201	8	57		
	Intermediate French II	FRN 201 and 202	8	61		
German Language	Elementary German I	GER 101	4	43	IV-B	
	Elementary German II	GER 101 and 102	8	50		
	Intermediate German I	GER 102 and 201	8	57		
	Intermediate German II	GER 201 and 202	8	63		
Humanities	English Credit and Humanities Credit (*See Item C above)	ENG CREDIT	3	50		
		HUM CREDIT	3			
Introductory Psychology	Introduction to Psychology	PSY 100	3	50	III-A	
Introductory Sociology	Introductory Sociology	SOC 100	3	50	III-B	
Pre-Calculus	Pre-Calculus Mathematics	MTH 130	4	50	Math	
Principles of Accounting	Introduction to Financial Accounting	ACC 250 or ACC 201	3	50		
Principles of Management	Introduction to Management	MGT 312	3	52		
Principles of Marketing	Introduction to Marketing	MKT 300	3	50		
Social Science and History	Social Science Credit and History Credit (*See Item C above)	SSC CREDIT*	3	50		
		HST CREDIT*	3			
Spanish Language	Elementary Spanish I	SPN 101	4	46	IV-B	
	Elementary Spanish II	SPN 101 and 102	8	51		
	Intermediate Spanish I	SPN 102 and 201	8	53		
	Intermediate Spanish II	SPN 201 and 202	8	58		
	Intermediate Conv. & Comp.	SPN 201, 202, and 214	11	61 and higher		



## International Baccalaureate

High school students may be able to receive credit through the International Baccalaureate (IB) Diploma Programme. IB examination scores should be sent for evaluation from the IB Office (New York, Geneva, or London) directly to Registrar's Office, Attention: Transfer Credit, Warriner Hall 212, Central Michigan University, Mt. Pleasant, MI 48859 USA. Strong scores on IB Higher Level examinations may allow for course waiver or course credit. The following table shows the current credit awarded for specific IB examinations and scores. Additional IB course content and examinations are under review by departments. Contact the Registrar's office for the most current information.

IB Course Name & Exam Level	Score Required	CMU Equivalent	Credit	Course Number	U.P./Competency*
Biology HL	4 or Higher	General Biology/Concepts of Biology and Biology Credit	6	BIO 101 (3)	II-A
				BIO Credit (3)	
Business Management HL	4 or Higher	Essential Business Skills	3	BUS 100	
Chemistry HL	5 or Higher	General Chemistry I & General Chemistry II	8	CHM 131 & CHM 132	II-B
Computer Science HL	3 or 4 5, 6, or 7	A First Byte of Computer Science CPS Credit*	3	CPS 101	II-A
			6	CPS Credit (3) + CPS 101 (3)	
*Note: the CPS credit can substitute for CPS 180 on the major if the student takes an internal placement test in Java.					
Economics A HL	5 or Higher	Principles of Macroeconomics and Principles of Microeconomics	6	ECO 201 (3)	
				ECO 202 (3)	
English A: Literature HL (Language)	4 or Higher	Freshman Composition and	6	ENG 101 (3)	Freshman Composition
		Introduction to Literature		ENG 134 (3)	I-B
English A: Language and Literature HL (Language)	4 or Higher	Introduction to Literature	3	ENG 134 (3)	Freshman Composition
French B HL (Language)	4 or 5	Elementary French II and Intermediate French I	8	FRN 102 (4) FRN 201 (4)	IV-B
French B HL (Language)	6 or 7	Intermediate French I and Intermediate French II	8	FRN 201 (4) FRN 202 (4)	IV-B
French A HL (Literature)	3 or higher	Intermediate French II and French Conv. and Comp. I	7	FRN 202 (4) FRN 315 (3)	IV-B
German B HL (Language)	4 or 5	Elementary German II and Intermediate German I	8	GER 102 (4) GER 201 (4)	IV-B
German B HL (Language)	6 or 7	Intermediate German I and Intermediate German II	8	GER 201 (4) GER 202 (4)	IV-B
German A HL (Literature)	3 or higher	Intermediate German II and Advanced German I or II	7	GER 202 (4) GER 311 or 312 (3)	IV-B
History - Africa and Middle East HL	4 or Higher	The African Experience and History Credit	6	HST 176 (3)	IV-B
				HST Credit (3)	
History of the Americas HL	4 or Higher	United States to 1865 and United States 1865 to Present	6	HST 111 (3)	III-B
				HST 112 (3)	III-B
History – East Asian HL	4 or Higher	Modern East Asia	3	HST 168 (3)	IV-B
History – Europe HL	4 or Higher	History Credit	6	HST Credit (6)	I-A
History HL - World History	4 or Higher	History Credit	3	HST Credit (3)	
Mathematics: Analysis and Approaches HL	4 5 or 6 7 or higher	Pre-Calculus Mathematics Calculus I Calculus I and Calculus II	4	MTH 130 (4)	Mathematics Competency
			4	MTH 132 (4)	
			8	MTH 132/MTH 133 (8).	
Mathematics: Applications and Interpretation HL	4 or higher	Mathematics: A Modeling Approach	3	MTH 113	Mathematics Competency and II-B
Music HL	5 or higher	Listening Exp.: Expand Your Playlist and Music Credit	5	MUS 114 (3) MUS Credit (2)	I-B
Philosophy HL	4 or Higher	Introduction to Philosophy and Critical Thinking in Everyday Life	6	PHL 100 (3)	I-A
				PHL 105 (3)	
Physics HL	4	University Physics I and University Physics Laboratory I	5	PHY 145QR (4) PHY 175 (1)	II-B
Physics HL	5 or Higher	University Physics I & University Physics Laboratory I University Physics II & University Physics Laboratory II	10	PHY 145QR (4) and PHY 175 (1)	II-B
				PHY 146 (4) and PHY 176 (1)	

International Baccalaureate					
IB Course Name & Exam Level (continued)	Score Required	CMU Equivalent	Credit	Course Number	U.P./Competency*
Psychology HL	4 or Higher	Introduction to Psychology	3	PSY 100 (3)	III-A
Social and Cultural Anthropology HL	4 or Higher	Anthropology Credit	3	ANT Credit (3)	
Spanish B HL (Language)	4 or 5	Elementary Spanish II and Intermediate Spanish I	8	SPN 102 (4) SPN 201 (4)	IV-B
Spanish B HL (Language)	6 or 7	Intermediate Spanish I and Intermediate Spanish II and	7	SPN 201 (4) SPN 202 (3)	IV-B
Spanish A HL (Literature)	3 or Higher	Intermediate Spanish II and Intercultural Conversations	6	SPN 202 (3) SPN 341 (3)	IV-B
Theatre HL	4 or Higher	Acting I	3	TAI 182 (3)	
Visual Arts Option A HL in English	No Credit	No Credit	0	No Credit	

**\*Note:** The University Program or Competency credit apply only to the course directly to the left of the University Program Group or the competency designator. For example, a score of 4 or higher on the Biology HL exam will gain the student 6 credits, 3 credits for BIO 101 and lab, and 3 unspecified BIO credits. Only BIO 101 with the lab counts for University Program Group II-A credit. The unspecified BIO credit does not count toward a University Program requirement.

The Seal of Biliteracy				
(Michigan, Illinois, Indiana, and other states approved at <a href="https://sealofbiliteracy.org">https://sealofbiliteracy.org</a> )				
Seal of Biliteracy in	CMU Course Equivalent	Course Number	Credit	UP Equivalency
French	Intermediate French I and Intermediate French II	FRN 201 (4 cr) FRN 202 (4 cr)	8	IV-B
German	Intermediate German I and Intermediate German II	GER 201 (4 cr) GER 202 (4 cr)	8	IV-B
Japanese	Intermediate Japanese I and Intermediate Japanese II	JPN 201 (4 cr) JPN 202 (4 cr)	8	IV-B
Spanish	Intermediate Spanish I and Intermediate Spanish II	SPN 201 (4 cr) SPN 202 (3 cr)	7	IV-B

# » Requirements for Graduation

## Undergraduate Application for Graduation

Degrees are not awarded automatically upon completion of scholastic requirements. During the semester or session in which students will complete 86 credit hours, an application for graduation should be submitted. Applications for graduation can be submitted online through Degree Progress or the Registrar's website. An official graduation audit indicating remaining degree requirements will be e-mailed to students. Applications are processed in the order they are received for each graduation. Degrees are conferred six times each year: March, May, June, August, October, and December. Application submission should be based on the following timeline: October 1 for spring graduation, February 1 for summer graduation, and April 1 for fall graduation. There is no application fee. For additional information call 989-774-3261.

## Summary of Graduation Requirements

Each candidate for a baccalaureate degree shall:

1. Matriculate as a regular undergraduate student.
2. Fulfill the requirements prescribed on a degree.
3. Complete a declared major, or a major and a minor, or minors as indicated on the chosen degree.
4. File application for graduation online early in the enrollment period or semester in which the student will complete 86 semester hours of credit, but not later than the beginning of the semester or session prior to the semester or session in which the student plans to graduate.
5. Present 30 semester hours of credit earned at Central Michigan University. See the *Residence Credit for Main Campus Students* or the *General Residency Policy for CMU Online Students* in the next column for more information.
6. Fulfill the General Education Requirements including University Program and Competency Requirements. Students may not take more than two courses or seven hours for CR/NC in the University Program. Students must earn a minimum cumulative grade point average of 2.00 in University Program courses in order to graduate.
7. Present a cumulative point average of 2.00 (C) or higher and a point average of 2.00 (C) or higher in major(s) and minor(s).
8. Present a minimum of 40 semester hours of credit equivalent to the CMU level of 300 or above. For students with prior learning credits, 20 semester hours may be prior learning assessment credit.
9. Present a minimum of 120 semester credit hours that may include a maximum of six hours RLA and/or PED activities. Some degrees and majors have minimums above 120. Sixty semester credit hours must be earned at an accredited four-year degree-granting institution or from a foreign university or college approved by the government or the official regulating agency of the country in which the university or college is located. An exception is made for programs guided by articulation agreements with the University or for graduates of a state-approved school of nursing who have passed the National Council Licensing Examination for Registered Nurses (NCLEX-RN).
10. None of these sixty hours may include physical education activity courses. The Registrar's Office makes the decision regarding the acceptability of transfer credits according to the Transfer Credit Policy. Appeals of the decisions of the Registrar's Office may be filed with the Board of Appeals

Candidates for a teaching certificate must file an application to a Teacher Education Program. Refer to Teacher Certification section for details.

*Approved by the Provost, 6/28/19*

## Bulletin Used to Determine Graduation Requirements

Graduation requirements for a baccalaureate degree are based on the regulations and requirements printed in the Central Michigan University Bulletin in effect at the time of a student's initial registration at a regionally accredited two- or four-year college or university or from a foreign university or college approved by the government or the official regulating agency of the country in which the college or university is located. A Bulletin published after initial registration may be chosen by the student when it is to the student's advantage. The time limitation on this provision is that no student may graduate under the requirements of a Bulletin published more than seven calendar years prior to the date of graduation.

The University Bulletin covers a 12-month period, July 1 through June 30. Courses, majors, minors, programs, and degrees in this catalog are subject to change without notice and may not be available in the future.

## Residence Credit for Main Campus Students

Candidates for a bachelor's degree must earn at least 30 semester hours of credit at Central Michigan University.

Candidates for a short course certificate must earn at least one-fourth of the credits required on the program at this university.

Candidates who already hold a bachelor's degree and are seeking a standard certificate must earn at least 15 semester hours of credit at this institution.

Prior learning credit, Advanced Placement, CLEP or International Baccalaureate credit, and hours earned by Credit by Examination may not be applied to meet any of the hours required in residence.

*Approved by the Academic Senate, 12/4/18*

## General Residency for CMU Online Students

All courses offered through CMU Online carry Central Michigan University credit, regardless of the geographic location where they may be offered, and main campus instruction is not required for degree or certificate completion. To fulfill degree requirements, an undergraduate student must successfully complete at least 30 semester hours of university residence credit through campus and/or CMU Online experiences. CLEP credit, Prior Learning Credit, and hours earned by Credit by Examination may not be applied to meet any of the hours required in residence.

## Web-based (Online and Hybrid) Courses

Courses in web-based (online and hybrid) format may be used to complete degree requirements. CMU courses and programs approved for web-based delivery are given in the descriptions of courses, majors, minors and degrees in this Bulletin.

## Commencement Ceremonies

There are two commencement ceremonies held each year: May and December. Spring graduates can participate in May commencement, and summer and fall graduates can participate in December commencement. Diplomas are not distributed at commencement ceremonies and are mailed to all students on the graduation list who satisfactorily complete all graduation requirements.

Graduation ceremonies may be scheduled at off-campus locations. Detailed information and schedules may be obtained through CMU Online at [cmuonline@cmich.edu](mailto:cmuonline@cmich.edu).

## Two Degrees

A student may apply for a second baccalaureate degree from Central Michigan University if the degrees are different and the following criteria are met.

To earn two baccalaureate degrees from Central Michigan University at the same time, a student must:

1. Satisfy all requirements for each of the two degrees, including graduation and degree requirements.
2. Successfully complete a minimum of 30 semester hours of credit beyond those required for the degree with the most credits.
3. Successfully complete a minimum of 30 semester hours from Central Michigan University.

To earn a second baccalaureate degree from Central Michigan University after having earned the first degree from an accredited institution, a student must:

1. Satisfy all requirements for the second degree, including graduation and degree requirements. General Education requirements are regarded as satisfied by the first degree. Thus, completion of the General Education program is not required.
2. Present a minimum of 30 semester hours of credit from Central Michigan University beyond those required for the first degree.

*(Academic Senate, 3/24/20).*

## Degree Program for Pre-professional Students

A degree program for students on a combined pre-professional program at Central Michigan University and an accredited professional school has been approved as follows:

A student who has pursued a pre-professional course at Central Michigan University for a period of three years, and completed a minimum of 94 semester hours of credit prior to entering a professional school, and completed a B.A. or B.S. degree, with a declared major and minor, will be allowed to graduate from Central Michigan University by submitting one year of satisfactory work consisting of not less than 30 semester hours from a professional school accredited by the North Central Association or by the official accrediting agency for the professional school.

## Outstanding Scholarship Recognition

The university recognizes the importance of high scholarship and seeks to stimulate and encourage students in high achievement.

### Semester Recognition

The Dean's List is published by the Office of the Provost, which names students who have achieved a high scholastic standing for a given semester. Students' academic standings are provided by the Office of the Registrar. The Provost and Executive Vice President recognizes this achievement by sending a congratulatory letter and posting the list online: <https://www.cmich.edu/about/university-leadership/office-provost/deans-list>.

To qualify for this recognition, a student must have earned a grade point average of 3.50 or higher while completing 12 or more letter-graded hours of CMU credit during a given semester. Those students achieving a 4.00 semester grade point average are named to the President's List and will also receive a congratulatory letter.

### Graduation with Honors

In order to graduate with honors, a student must have a total cumulative grade point average, based only on letter-graded Central Michigan University credits, as indicated below:

#### Point Average

3.90 - 4.00 Summa Cum Laude

3.75 - 3.89 Magna Cum Laude

3.50 - 3.74 Cum Laude

Honors will be indicated on the student's diploma and transcript.

*(Academic Senate, 11/1/22)*

## Undergraduate Certificates

A credit-bearing Undergraduate Certificate is awarded in recognition of a prescribed pattern of courses and/or experiences when taken together to produce an emphasis that gives a student a competence which is noted on the transcript.

An undergraduate certificate program may be available to degree-seeking or non-degree-seeking students. Undergraduate certificates are able to stand alone, or be part of another curriculum. Some credit-bearing certificate programs are restricted to degree-seeking students only (see the index under "Undergraduate Certificates" for more information).

Certificates are noted on the transcript when all courses have been completed and students will receive an official CMU Certificate signed by the President and Chair of the Board of Trustees. Certificates are offered to both degree-seeking and non-degree students. For degree-seeking students, recognition of their certificate occurs at the same commencement ceremony as their degree. Students earning a stand-alone certificate are eligible to attend the commencement ceremony immediately after the certificate courses have been completed.

*(Academic Senate, March 2, 2021)*



# » Special Programs and Studies

## The Honors Program

### Dr. Patricia Williamson, Director

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Powers 104

Central Michigan University

[www.cmich.edu/honors](http://www.cmich.edu/honors)

Since 1961 the Honors Program has challenged CMU's brightest, most talented, highly motivated, and creative students both in and outside of the classroom while pursuing an enriched program of study.

### The Honors Program Mission:

Providing high academic ability students with unique educational opportunities and experiences, the CMU Honors Program challenges students to aim higher and to achieve more academically, personally, and professionally for the greater good of our disciplines, our society, and our world.

### Core Values

The primary values that guide the implementation of the Honors Program mission include:

- Critical thought, scholarly inquiry, and creative expression;
- Respect and appreciation for diverse peoples and ideas in a global society;
- High standards for integrity and personal aspirations;
- Active citizenship and service for the greater good Benefits of Honors Study.

In addition to a unique learning environment, there are many tangible benefits of Honors study:

- Honors Faculty and Alumni mentoring;
- Academic Planning Document that helps map out all courses you will need each semester to graduate from Central Michigan University;
- Eligibility for Honors scholarships and awards;
- Undergraduate research opportunities;
- Small class size, limited to 20 students in most Honors sections;
- Recognition of achievement through transcript designation "Graduated in the Honors Program" and commencement program notation;
- Eligibility to live in Larzelere Hall, the designated Honors residence hall and community;
- Individualized academic advising through the Honors Program Academic Advisors;
- Eligibility to enroll in graduate courses;
- Opportunity to participate in Honors registered student organizations;
- Participation in a variety of Honors sponsored social, cultural, and international activities;
- Priority registration.

### Honors Study Options

Honors study is flexible in nature and can fit into any degree, major, or minor.

Several options exist through which students can earn Honors credits:

- Honors sections of departmental courses along with special topics Honors courses offered every semester.
- Special Honors faculty-led courses on Beaver Island, throughout the United States, and around the world each spring and summer terms.
- Honors Contracts that allow a student to take some CMU classes for Honors credit through an arrangement between the student and the instructor, with the approval of the Honors Director.
- An Honors Independent Study of a specific topic under the direction of a faculty member, allowing for more in-depth investigation, empirical research, or expanded coverage.
- A Senior Project, mentored by a faculty member, in which the student makes an original contribution in research, scholarship, or creative endeavor.

### Admission and Completion of Honors Study

The University invites all high ability students to review the admission requirements and Honors application available on the Honors Program website listed above.

In order to remain active in the Honors Program and graduate in the Honors Program, students must maintain a cumulative grade point average of 3.25 and earn a grade of at least "B-" in all Honors courses, Honors Contracts, Honors Independent Study, or Senior Project taken for credit. Graduation from the Honors Program also requires completion of the protocol specified in the year of admission.

### Honors Program Protocol Requirements

*For students accepted to the CMU Honors Program on or after Fall, 2014.* Honors students must complete each of the following requirements to graduate with Honors Program distinction. Completion of the Honors Protocol will result in "Honors Program Graduate" being noted on the student's permanent transcript. Transfer students and CMU students admitted to Honors after the first year should follow Honors Program Track II requirements (*next page*).

1. Completion of HON 100 (3), Introduction to Honors, during one's first semester at CMU.
2. Completion of an Honors First Year Seminar, (3 credits), during one's first semester at CMU. Honors first year seminars are also University Program courses that satisfy the general education "writing intensive" requirement. Options include: HON 201WI, HON 202WI, HON 203WI, HON 204WI, HON 205WI, HON 206WI, HON 207WI, HON 208WI, or HON 209WI.
3. Completion of ENG 201H (3), English Composition, during one's second (spring semester at CMU).
4. Complete at least an additional 15 credits of Honors coursework before graduation from CMU (in addition to HON 499). Honors coursework is defined as HON courses, H-designated courses, and Honors Contracts successfully completed. Honors Contracts may be used to fulfill a maximum of 6 of these 15 credits, with the approval of the Honors Director.
5. To enhance exposure to cultural diversity (the study of a cultural aspect substantially different than one's own either in or outside the United States for college credit), complete a minimum of 6 credit hours of the following at the college level:
  - Study Abroad courses for college credit
  - HON 309: Global Citizenship
  - Foreign language courses
  - American Sign Language courses (ASL 101 or above)
  - Honors Cultural Diversity courses approved by the Honors Council

6. Complete 120 service hours while a student at CMU.
7. Develop and get approval for an Honors Senior Project Proposal. The senior project involves research or a creative endeavor conducted with a faculty advisor from the student's major or minor discipline. Students are encouraged to begin planning for the senior project during their junior or third year of study at CMU. Proposals must be approved by the senior project advisor and the Honors director. The Senior Project Proposal is due two full semesters before the student plans to graduate (excluding summer semesters).
8. Complete an Honors Senior Project and simultaneously enroll in HON 499\* (3 credits). The completed senior project and all other Protocol requirements are due at least one full semester before the student plans to graduate. Students are required to present work from their project in a public venue, which may include professional conferences, public exhibitions, or the CMU Student Research and Creative Endeavors Exhibition. Submission of work for publication or juried exhibition is also encouraged.

\*HON 499 can be taken as a writing intensive course if the proposal outlines it as such.

#### Notes:

- At least 9 credits total of Honors coursework on the Honors Protocol must be taken at the 300 level or above (in addition to HON 499).
- Students must maintain a cumulative CMU grade point average of 3.25 to remain active in and graduate from the Honors Program.
- Students are required to earn a grade of at least "B-" in all H, HON, or Honors Contract courses.
- An Honors course may not be counted in more than one area of the Protocol. For example, if a student takes ASL 101H the student must decide if he/she would like to count it as an Honors course or a cultural diversity course.

## CMU Honors Program Protocol: Track II

Track II Honors students must complete each of the following requirements to graduate with Honors Program distinction. Completion of the Honors Track II Protocol will result in "Honors Program Graduate" being noted on the student's permanent transcript.

1. Completion of HON 300, *Introduction to Honors II* (3 credits), taken during fall semester of student's first year in the Honors Program.
2. Complete a 300-level HON-designator Honors Seminar Course (3 credits).
3. Complete at least 9 additional credits of Honors coursework before graduation from CMU (in addition to HON 499). Honors coursework is defined as HON courses, H-designated courses, and Honors Contracts successfully completed. Honors Contracts may be used to fulfill a maximum of 6 of these 9 credits, *with the approval of the Honors Director*.
4. To enhance exposure to cultural diversity (the study of a cultural aspect substantially different than one's own either in or outside the United States for college credit), complete a minimum of 3 credit hours of the following at the college level:
  - Study Abroad courses for college credit
  - HON 309, Honors Global Citizenship
  - Foreign language courses
  - American Sign Language courses (ASL 101 or above)
  - Honors Cultural Diversity courses approved by the Honors Council

5. Complete 90 service hours during one's time at CMU.
6. Develop and get approval for an Honors Senior Project Proposal. The senior project involves research or a creative endeavor conducted with a faculty advisor from the student's major or minor discipline. Proposals must be approved by the senior project advisor and the Honors director. The Senior Project Proposal is generally due two full semesters before the student plans to graduate.
7. Complete an Honors Senior Project and simultaneously enroll in HON 499\* (3 credits). Students are required to present work from their project in a public venue, which may include professional conferences, public exhibitions, or the CMU Student Research and Creative Endeavors Exhibition. Submission of work for publication or juried exhibition are also encouraged.

\*HON 499 can be taken as a writing intensive course if the proposal outlines it as such.

#### Notes:

- At least 6 credits total of Honors coursework on the Honors Protocol must be taken at the 300 level or above (in addition to HON 499).
- Students must maintain a cumulative CMU grade point average of 3.25 to remain active in and graduate from the Honors Program.
- Students are required to earn a grade of at least "B-" in all H, HON, or Honors Contract courses.
- An Honors course may not be counted in more than one area of the Protocol. For example, if a student takes ASL 101H the student must decide if he/she would like to count it as an Honors course or a cultural diversity course.

By accepting admission to the Honors Program, you are agreeing to complete the Honors Track II Protocol requirements and adhere to the Honors Academic and Personal Integrity Policies.

#### Honors Program Academic Honesty Statement

As a member of the Honors Program at Central Michigan University, you are participating in a community of scholarship based on the values of honesty, respect, fairness, and responsibility. You are expected to adhere to the CMU policies on academic integrity stipulated in the CMU Bulletin. In all of your academic work, you must adhere to the highest standards of integrity. You will not cheat, plagiarize, or receive or provide inappropriate assistance on any course activity for which a grade or credit is awarded. Examples of academic dishonesty include: cheating on examinations; plagiarism; fabrication/forgery/obstruction; multiple submissions; complicity (assisting or attempting to assist another person in any act of academic dishonesty); misconduct in research and creative endeavors; computer misuse; misuse of intellectual property; unethical and unprofessional behavior; disruption of learning; disruptive behavior during class; and disruption of university events. Membership in the Honors Program is based on academic performance and all forms of cheating call into question the validity of a student's grades. Participation in the CMU Honors Program is a privilege, and failure to adhere to standards of academic integrity may result in dismissal from the Honors Program.

## Sarah R. Opperman Leadership Institute

### Daniel Gaken, Director

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Mt. Pleasant, MI 48859  
989-774-LEAD (5323)  
[www.cmich.edu/leadership](http://www.cmich.edu/leadership)

#### Introduction

The Leadership Institute was established in 1997 to help Central Michigan University prepare students to serve as leaders in business, government, education, and community agencies. Since its creation, the Leadership Institute has been recognized as a national best practices program for creating student leaders. The Leadership Institute functions as the coordinating body for the university's present and future leadership-related activities and programming. The Institute works to ensure that CMU graduates leaders, this work is guided by four overarching leadership learning goals:

1. Leadership knowledge and application: students understand theoretical and historical perspectives of leadership, they are equipped to evaluate options, think critically, and take healthy risks, and are forward thinking.
2. Identity development: students demonstrate accurate self-appraisal, have developed a well-defined sense of purpose, understand their identities and intersectionality of them, and they seek and consider feedback from others.
3. Health relationships: student can manage interpersonal conflict effectively, display appropriately assertive behavior, develop mutually beneficial relationships, value diverse perspectives, and demonstrate care for others.
4. Social responsibility: students understand power and privilege, actively work for the great good (social justice), demonstrate consideration for the welfare of others in decision-making, and act with integrity.

The work of the Institute is done through academic courses, workshops, seminars, conferences, service learning and volunteerism.

#### Leader Advancement Scholarship (LAS) Protocol

Recipients of the Leader Advancement Scholarship follow a comprehensive leadership development protocol. The protocol is overseen by the Academic Senate's Leadership Council and contains both academic coursework and experiential learning opportunities. Courses across the academic colleges have been chosen for course objectives related to leadership. Faculty with expertise in leadership modify these courses to infuse leadership theory into the class.

All Leader Advancement Scholarship recipients will complete specified courses together as a cohort. Most courses are components of the University's General Education requirements and do not constitute additional coursework. Additionally, the courses required in the LAS protocol align well with the University's leadership studies minor.

Leader Advancement Scholars document their leadership learning through a dynamic online portfolio. Students completing the protocol will be recognized at the University's commencement ceremony with a Leadership Institute medal.

#### LAS Academic Coursework:

##### Required:

Complete the required courses before 56 credit hours:  
LDR 100 – Introduction to Leadership Education and Development 1(1-0)  
CGL 145 L – Racism and Discrimination in America through Dialogue 3(3-0)  
LDR 200 L – Introduction to Leadership 3(2-2)  
COM 267 L – Introduction to Debate 3(3-0)

##### Elective Group One:

Complete at least three (3) credits of the following L coursework that satisfy general education University Program and/or writing Intensive requirements before 56 credit hours:

PHL 118 L – Moral Problems 3(3-0)  
HST 120 L WI – Unlikely Princesses: Women of World History 3(3-0)  
PSY 100 L – Introduction to Psychology 3(3-0)  
PAD 211 L WI – Introduction to Nonprofit Leadership 3(3-0)

##### Elective Group Two:

Complete at least an additional six (6) credits of approved coursework before graduation from CMU; defined as LDR courses, L-designated courses, or with the approval of the LAS Director:

COM 461 L – Communication in Leadership 3(3-0)  
LDR 302 – Field Experience in Leadership 3(Spec)  
LDR 499 L – Contemporary Issues in Leadership 3(3-0)  
CGL 445 – Intergroup Dialogue Facilitation 3(3-0)  
CGL 302 – Cultural and Global Studies Internship 1-3(Spec)

#### LAS Experiences:

##### Freshman Year:

- Involvement in one (1) student organization
- Attendance at one (1) multicultural event each semester
- Participation in a seminar or workshop pertaining to leadership (Spark Leadership Series or LeaderShape)
- Completion of thirty (30) hours of community service or volunteer activity
- Reside in Calkins Hall
- Document your leadership experiences through an online portfolio

##### Sophomore Year:

- Involvement in two (2) student organizations
- Attendance at one (1) multicultural event each semester
- Attendance at designated leadership activities
- Completion of thirty (30) hours of community service or volunteer activity
- Mentor a freshman member of the LAS cohort
- Active on a Leadership Institute Involvement (committee or facilitator role)
- Reside in any on-campus housing
- Document your leadership experiences through an online portfolio

##### Junior Year:

- Involvement in two (2) student organizations
- Hold a leadership role in an organization (RSO executive board or equivalent)
- Attendance at one (1) multicultural event each semester
- Attendance at designated leadership activities
- Completion of thirty (30) hours of community service or volunteer activity
- Service on a University or community committee (either junior OR senior year)
- Active on a Leadership Institute Involvement (committee or facilitator role)
- Document your leadership experiences through an online portfolio

##### Senior Year:

- Involvement in two (2) student organizations
- Hold a leadership role in an organization (RSO executive board or equivalent)
- Attendance at one (1) multicultural event each semester
- Attendance at designated leadership activities
- Completion of thirty (30) hours of community service or volunteer activity
- Service on a University or community committee (either junior OR senior year)
- Document your leadership experiences through an online portfolio

#### Co-Curricular Leadership Programs

The Leadership Institute offers a four-year leadership program sequence. Enrollment in student leadership programs is open to all Central Michigan University undergraduate and graduate students. Programs include Leadership Safari, Spark Leadership, the Connections Leadership Conference, Ignite Leadership, and the LeaderShape Institute.

## First-Year Experience

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[fye@cmich.edu](mailto:fye@cmich.edu)

[www.fye.cmich.edu](http://www.fye.cmich.edu)

### Overview of FYE 101.

The First-Year Experience offers an extended orientation to the Central Michigan University environment. FYE 101 is a one-credit-hour course forming the academic portion of that experience. Students learn the value of a liberal arts education and are introduced to the academic expectations of the university. The primary goals of FYE 101 are to 1) Increase understanding of higher education processes and principles that guide student development, 2) Empower students to promote their own academic and personal growth, and 3) Engage students in the diverse intellectual and civic endeavors within the university and larger community. It is our intent that your participation in a First-Year Experience will lead to a more positive college experience ultimately leading to timely graduation. Students who participate in a First-Year Experience are more likely to feel confident, have clear educational goals, know campus resources, feel more comfortable with diversity, and have the skills to solve class or academic problems than other students.

### Structure of FYE 101

Students enrolled in FYE 101 meet weekly with an instructor and other first-year students in a small group. Students engage in discussions, inquiries, and explorations related to higher education and student growth. They develop strategies for both a successful and meaningful college experience. Concepts are introduced through active and experiential learning leading to an exploration of services, programs, ideas and resources available at Central Michigan University. FYE 101 sections meet for the full sixteen-week semester.

### Instructors Who Teach FYE 101

Highly qualified and experienced CMU instructors teach each student enrolling in FYE 101. FYE 101 instructors are specifically recruited from various university programs based on their commitment to helping students. These are experienced educators with successful records of quality teaching and a genuine commitment to each student's success.

### Enrollment in FYE 101

For the 2022-2023 academic year, only one special section of the course is being offered. This section is listed in the Course Search with an indication of the prerequisite for enrollment. Since FYE 101 courses are open only to students enrolling for the first time at CMU, students will have an opportunity during Orientation to discuss whether enrollment in FYE 101 is the best direction.

## McNair Scholars Program

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### Lynn Curry, Director

Robinson 118

989-774-1364

[www.mcnair.cmich.edu](http://www.mcnair.cmich.edu)

**Background.** The McNair Scholars Program prepares undergraduate participants for doctoral study through involvement in research and other scholarly activities. McNair scholars are from disadvantaged backgrounds and demonstrate strong academic potential. Funded by the U.S. Department of Education and named after the late Dr. Ronald E. McNair, the goal of the program is to increase attainment of the Ph.D. by students from underrepresented segments of society.

**Eligibility.** Students are eligible to become McNair scholars if they are seriously interested in pursuing graduate study (specifically a Ph.D.), U.S. citizens or permanent residents, full-time students at CMU with a minimum GPA of 2.8, at the sophomore or junior level and are low-income and first-generation college students and/or members of a population underrepresented in graduate education (typically African American, Native American or Hispanic).

**Activities.** New scholars (spring and summer) identify a faculty research mentor, develop a research proposal, investigate graduate programs of interest, prepare to take the Graduate Record Exam (GRE), conduct supervised research, write a research report, attend a graduate school training camp, and complete the Summer Research Institute (SRI). Continuing scholars (fall and spring) present their research at professional meetings and national conferences accompanied by their mentors or McNair staff, visit their top choice graduate school, apply for admission to graduate programs, and complete their bachelor's degree.

**Benefits.** McNair scholars receive a \$2400 stipend plus a living allowance during the summer. Scholars receive a travel allowance to attend undergraduate research conferences and/or professional meetings to present their research and are funded to visit potential graduate schools. They also receive GRE waivers and graduate admission fee waivers for most institutions to which they apply. Scholars participate in a research writing course and attend a GRE training class, which are also covered by the program.

**To Apply.** Applications are accepted throughout the year; however, a formal recruitment period occurs each fall. Feel free to stop by the office to learn more about the program and/or pick up an application.



## Pre-Professional Studies

Pre-professional Studies are designed to assist students in understanding the requirements for applying to professional schools and programs. Students are urged to contact an advisor within their college as soon as possible to discuss a plan of action for selecting courses, to gather information regarding requirements for entrance in professional schools, and to determine an appropriate undergraduate major at Central Michigan University. For more information, see an advisor.

**Pre-Professional Studies are NOT majors or minors at Central Michigan University.** Students choose an undergraduate major to satisfy the policy requiring a declared major or a statement of an intent to major by the completion of 56 credit hours. Students should consult the chart of available majors (see Majors and Minors in the index).

### Joint Nursing Education Pathway (JNEP)

For more information, go to <https://www.cmich.edu/academics/colleges/CHPSRMS-JNEP>

The CMU-Mid Michigan College Joint Nursing Education Pathway (JNEP) program is designed as a partnership with the Mid Michigan College (MID) associate degree nursing program (ADN/RN) and CMU's RN-to-BSN program. The JNEP is a three-phase program. In phase one, students take their general education and nursing prerequisite courses at CMU. Phase two occurs at Mid Michigan College when the student begins coursework in the ADN/RN program. Phase two ends when the student graduates from the ADN/RN program and passes the NCLEX-RN examination. In phase three, students complete their BSN coursework at CMU and graduate from the RN-to-BSN program.

Students work closely with their academic advisor and the CMU Nursing program to plan their application to the MID's Nursing program. Before a student can apply to MID's Nursing Program, they must be enrolled in the JNEP program through CMU. Through the JNEP agreement, MID holds a designated number of spots each semester for CMU students in the JNEP program. Students cannot independently apply to MID through the JNEP without enrolling in the JNEP program at CMU and having their information forwarded to MID by the CMU Nursing Program Director. All students seeking to enroll in the JNEP program must meet with the CMU Nursing Program Director after declaring their major.

#### Recommended Course of Study

Students work closely with the academic advisor to plan their phase one courses.

##### First Semester:

- ENG 101: Freshman Composition 3(3-0)
- Math Competency
- University Program Group I Humanities\*
- University Program Group II Natural Sciences (with lab)\*
- Elective

##### Second Semester

- HSC 214: Human Anatomy 4(3-3)
- Oral Competency
- University Program Group III Social Sciences\*
- Elective\*
- Elective\*

##### Third Semester

- ENG 201 - Intermediate Composition 3(3-0)
- HSC 215 - Human Physiology 4(3-2)
- STA 282 - Introduction to Statistics 3(3-0)
- Elective\*
- Elective\*

*\*Courses are selected in accordance with an advisor*

#### Recommended electives to meet minimum of 120 hours for graduation with BSN degree taken during Phase one:

- BIO 208: Microbiology 4(3-3)
- HSC 201: Medical Terminology 3(3-0)
- HSC 211: Human Anatomy and Physiology 3(3-0)
- HPS 101WI: Introduction to the Health Professions 3(3-0)
- PSY 100: Introduction to Psychology 3(3-0)
- REL 334: Death and Dying 3(3-0)
- SOC 100: Introduction to Sociology 3(3-0)

## Pre-Dentistry

Most dental schools have the following minimum requirements of one year each in: general chemistry, organic chemistry, biology, physics, and English. All of the above science classes must include a laboratory. Some schools recommend other courses. Further information about these requirements and other pertinent information concerning dental schools may be obtained from the advisor and from a book entitled ADEA Official Guide to Dental Schools.

**Recommended Course of Study:** The choice of a major is not critical, but careful planning is needed if one is to move effectively towards being a successful dental school applicant. The following abbreviated schedule indicates some of the recommended courses for a student interested in dentistry. All students should consult with the pre-dentistry advisor during their first semester on campus.

**First Semester:** BIO 111 (4), CHM 131(4), ENG 101(3), MTH 107 or higher(3-4), Elective, see advisor (0-3)

**Dental Admission Test (DAT):** Dental school applicants must also score well on the Dental Admission Test. This test, required by most dental schools, is usually administered as a computerized exam offered year round. Students can register for the exam online. It is strongly suggested that students plan on taking this test between April and June, just prior to the beginning of the application process.

**Application to Dental Schools:** These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most dental schools use the ADEA Associated American Dental School Application Service (AADSAS). This application service can be found online.

## Pre-Law

Students interested in the legal profession should consult with pre-law advisors early in their university career. Since pre-law draws on numerous academic disciplines, we encourage students to consult with several advisors. Many avenues of study can lead to law school.

Students should keep in mind the words of the Pre-Law Handbook published by the Association of American Law Schools:

"The Association's responsibility in matters of prelegal education cannot best be met by prescribing of certain courses for students planning later to study law. Such an endeavor is foreclosed by the wide range for choice of relevant pre-law preparation..."

The Association calls attention to the quality of undergraduate instruction, which is fundamental to the later attainment of legal competence. That quality of education requires that pre-law students develop basic skills and insights. It thus involves education fostering:

- a. comprehension and expression of words;
- b. critical understanding of the human institutions and values with which the law deals;
- c. creative power in thinking.

## Pre-Medicine and Osteopathy

This course of study is designed for a student who believes that medicine might be his or her chosen field for life. Although no specified CMU major is required, a student should plan to earn an undergraduate degree from CMU and must select a degree program from those found elsewhere in this Bulletin and successfully complete all its requirements.

**Requirements:** Most medical schools have the following minimum requirements of one year each in: biology (with laboratory), general chemistry (with laboratory), organic chemistry (with laboratory), physics (with laboratory), English, and behavioral science. Most require ninety semester hours of college credit, but a baccalaureate is strongly recommended, in order to apply. Some schools recommend other courses. Further information about these requirements and other pertinent information concerning medical schools may be obtained from the advisor and from a book entitled Medical School Admission

Requirements (MSAR). The admission requirements for Osteopathic Schools can be obtained from a book entitled Osteopathic Medical College Information Book.

**Recommended Course of Study:** The following abbreviated schedule indicates some of the recommended courses for a student interested in medicine. Only the first year is indicated so that all students may begin without undue delay. All students should consult with the pre-med advisor during their first semester on campus.

**First Semester:** ENG 101 (3); BIO 111 (4); CHM 131 (4); MTH 130 (4)

**Second Semester:** BIO 112 (4); CHM 132 (4); PSY 100 (3); UP, Writing Intensive (3), Elective (1-3)

**Medical College Admission Test (MCAT):** This test, required by most medical and osteopathic schools, is usually administered as a computer based test on multiple dates throughout the year. Students can register for the exam online. It is strongly suggested that students plan on taking this test between April and June, just prior to the beginning of the application process. The new MCAT Student Manual will be useful in preparation for this test and it may be obtained from the Association of American Medical Colleges.

**Application to Medical Schools:** These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most medical schools use the American Medical College Application Service (AMCAS), while osteopathic schools use the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS). These application services can be found online.

## Pre-Occupational Therapy

Students interested in pursuing a career in occupational therapy have a number of undergraduate majors they can select from at CMU that will compliment a Master's degree in Occupational Therapy. Students interested in OT should contact the OT advisor early in their first semester for guidance in selecting a major and identifying prerequisite coursework required for admission to a Master's degree program at other institutions. CMU has articulation agreements with Grand Valley State University and Saginaw Valley State University. Contact the Pre-Occupational Therapy advisor for more information.

**Typical courses to select from for the first semester:** ENG 101 (3); BIO 105QR (4); SOC 100 (3); PSY 100 (3); COM 101 (3); Math Competency Course (3); University Program course

## Pre-Optometry

Optometry schools require at least two years of pre-optometric study. Most students accepted by an optometry school have completed three undergraduate years and a large percentage have earned baccalaureates. Minimum requirements common to all optometry schools are one-half to one year of biology or zoology and one year each of chemistry, physics, English, and mathematics. The American Optometric Association recommends that the science courses include the laboratory and that they be the courses designed for science majors and minors. Most optometry schools require that the student complete differential calculus. All optometry schools have additional requirements. It is, therefore, important that the prospective optometry student consult the pre-optometry advisor prior to registering for courses.

**First Semester:** BIO 111 (4); CHM 131 (4); ENG 101 (3); MTH 130 (4)

**Optometry Admission Test (OAT):** This test, required by all optometry schools, is usually administered as a computerized exam offered year round. Student can register for the exam online and should plan on preparing for the exam three months before the scheduled test date.

**Application to Optometry Schools:** These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most optometry schools use the Optometry Centralized Application Service (OptomCAS). This application service can be found online.

## Pre-Pharmacy

The practice of pharmacy in the United States requires the Doctor of Pharmacy (Pharm.D.) Degree plus an internship. This degree requires six years of post high school study. In Michigan, accredited pharmacy programs are offered at Ferris State University, University of Michigan and Wayne State University. Internships can be completed at a variety of sites and are typically arranged before graduation. Each program has a different set of admission requirements. The program is completed at a regular college of pharmacy. Please contact the Pre-Pharmacy advisor for complete admission requirements.

The following abbreviated schedule indicates some of the recommended courses for a student interested in pharmacy. Only the first semester is indicated so that all students may begin without undue delay. No later than the second semester of the first year, All students should consult with the pre-pharmacy advisor concerning appropriate coursework during their first semester on campus.

**First Semester:** ENG 101 (3); CHM 131 (4); BIO 111 (4); MTH 130 OR 132 (4); Elective, see advisor (2)

**Pharmacy College Admission Test (PCAT):** This test, required by all pharmacy schools, is usually administered as a computerized exam offered in July, September and January. Student can register for the exam online and should plan on preparing for the exam three (3) months before the scheduled test date.

**Application to Pharmacy Schools:** These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most pharmacy schools use the Pharmacy College Application Service (PharmCAS). This application service can be found online.

## Pre-Physical Therapy

**Department of Physical Therapy:** Central Michigan University offers a Doctor of Physical Therapy (DPT). For a student to become eligible to apply for entry into the graduate DPT program, they must complete both: 1) the requirements for their undergraduate major, and 2) a series of prerequisite courses (listed below).

The student has the option to choose from a wide variety of undergraduate majors to prepare them for the physical therapy program. Suggested undergraduate majors include Exercise Science with an option in Kinesiology, Health Fitness and Performance or Clinical Exercise Science, Biology, Neuroscience, Psychology, Child Development, Therapeutic Recreation, Athletic Training and Health Administration. Students should consult with an advisor to identify the most appropriate undergraduate major for their interests, skills and career goals. Students must be assigned an advisor from their chosen undergraduate major to identify the courses that they need to take to complete the requirements of their undergraduate major.

Students also must complete a series of required prerequisite courses to prepare them for the graduate curriculum.

### Prerequisite Courses for Physical Therapy

**Biology/Health Science.** 14 credits are required, including courses in Anatomy (recommended CMU courses include HSC 214 OR BIO 337), Physiology (recommended CMU courses include HSC 215 OR BIO 392), and Exercise Physiology (recommended CMU course is HSC 308). Laboratories required for both Anatomy and Physiology.

**Chemistry.** 8 credits are required. Recommended sequences at CMU include CHM 131 and 132 OR CHM 120, 127 and 342. Laboratory experience required for all courses.

**Psychology.** 9 credits are required, including a course in developmental psychology. A course in rehabilitation or health psychology is strongly recommended.

**Physics.** 8-10 credits are required, including a laboratory experience. Suggested course sequences at CMU include either PHY 130QR, 170, 131, 171 or PHY 145QR, 146, 175, 176.

**Mathematics.** A background in algebra and trigonometry sufficient for success in chosen physics sequences. MTH 109 is a recommended course prior to PHY 130QR at CMU.

**Statistics.** An introductory course in statistics is required. Recommended CMU courses include BIO 500, PSY 211QR, HSC 544.

To gain admittance into the professional portion of the program, students need to complete a secondary application. Applications will be considered only if students have completed (or are in the process of completing) their major requirements, university program requirements and physical therapy prerequisite courses. Admission to the program is competitive. Students should contact their advisor for specific information on this process.

For a complete description of the application process and the Graduate Program in Physical Therapy, please consult the current Central Michigan University *Graduate Studies Bulletin*.

**Note for Transfer Students:** The recommended prerequisite courses have been chosen to provide students with the appropriate background to be successful in the professional curriculum. For students transferring from other institutions, the specific courses taken may vary and the equivalency of the content in those courses to meet the prerequisite requirements will be determined by the faculty of the physical therapy program. Under special circumstances, students may be admitted who have not completed the exact series of recommended prerequisite courses but can demonstrate that they possess an academic background that provides them an equivalent preparation. In those cases, the faculty of the program determines whether a student has received an equivalent preparation.

**Accreditation:** The Graduate Program in Physical Therapy at Central Michigan University is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA).

## Pre-Physician Assistant

As health professionals who are licensed to practice medicine with physician supervision, physician assistants provide many services that have been traditionally performed by physicians. Physician assistants take patient histories, conduct physical examinations, diagnose and treat illness, order and interpret laboratory tests, perform minor surgery and, in most states, prescribe medication.

Physician assistants work in a variety of medical settings including emergency departments, private physician practices, health care clinics, mental health facilities, and hospitals. Because physician assistants can deliver care in such diverse settings and are cost-effective members of the traditional health care team, employment opportunities are abundant for graduates of this master's degree program.

**Recommended Course of Study:** Pre-requisites vary by individual program, so students should meet with advisor during their first semester on campus. Common pre-requisites, along with their CMU equivalents, are listed below.

*Anatomy with associated lab:* BIO 337 or HSC 214

*Physiology with associated lab:* BIO 392 or HSC 215

*Microbiology:* BIO 208 or BIO 320

*Biochemistry:* CHM 421 or CHM 520

*Developmental Psychology:* PSY 220

**Graduate Record Examination (GRE):** This test, required by many PA programs, is usually administered as a computerized exam offered throughout the year. Student can register for the exam online and should plan on preparing for the exam three months before the scheduled test date.

**Application to PA Programs:** These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most PA programs use the Central Application Service for Physician Assistants (CASPA). This application service can be found online.

**CMU PA Program:** Students interested in the Graduate Physician Assistant program at CMU should visit the program website: [https://www.cmich.edu/colleges/CHP/hp\\_academics/srms/physician\\_assistant/Pages/default.aspx](https://www.cmich.edu/colleges/CHP/hp_academics/srms/physician_assistant/Pages/default.aspx). The Physician Assistant program at Central Michigan University is accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA).

## Pre-Veterinary Medicine

For information, go to <https://www.cmich.edu/colleges/se/Pre-Professional%20Programs/Pre-Veterinary%20Medicine/Pages/default.aspx>.

Veterinarians care for the health of animals. They diagnose, treat or research medical conditions and diseases of pets, livestock, and animals in zoos, racetracks and laboratories. In addition to private practice, numerous career paths are available to veterinarians. These include public health, pharmaceutical and biomedical research, zoo and aquarium medicine, wildlife medicine and rehabilitation, teaching, and military service. Veterinarians are employed by state and federal government agencies, private industry, universities and teaching hospitals, and the Army Veterinary Corps.

Admission to a professional program in veterinary medicine is highly competitive. Two to four years of college courses are required to complete the admission requirements for admission to veterinary school. Most Veterinary programs will accept applications for admission after completion of both the CMU program and either GRE or MCAT examination.

Before or during the first semester of college, students should make an appointment with a Pre-Veterinary advisor at CMU to outline a program of study that will satisfy the course requirements for application to veterinary programs.

**Recommended Course of Study:** The choice of a major is not critical, but careful planning is needed if one is to move effectively towards being a successful veterinary school applicant. The following abbreviated schedule indicates some of the recommended courses for a student interested in veterinary medicine. All students should consult with the pre-vet advisor during their first semester on campus.

**First Semester:** BIO 111 (4), CHM 131(4), ENG 101(3), MTH 107 or higher(3-4), Elective, see advisor (0-3)

**Graduate Record Examination (GRE):** This test, required by many Veterinarian programs, is usually administered as a computerized exam offered throughout the year. Student can register for the exam online and should plan on preparing for the exam three months before the scheduled test date.

**Application to Veterinary Schools:** These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most veterinary schools use the Veterinary Medical College Application Service (VMCAS). This application service can be found online.



# Degree Requirements

## Your Degree Plan

The undergraduate program of study at CMU consists of a minimum of 120 credit hours of academic work (depending which degree you choose) completed according to a planned program. The degree plan you choose to follow will be largely influenced by your choice of a major and your decision to earn or not to earn teacher certification. As you complete your degree requirements you will need to read carefully with your advisor the sections in this Bulletin entitled:

General Education Requirements:

The Competencies, page 131

University Program, page 137

Requirements for Graduation, page 102

Undergraduate Majors and Minors, page 144-147

## General Education Requirements

You should include in your beginning studies the General Education Requirements which consist of the Competencies and the University Program.

If you are pursuing teacher certification, you will also need to complete Teacher Certification Requirements. You must immediately and carefully read *Standards Leading to Teacher Certification* (page 484). Students interested in teaching in the elementary and secondary grades may contact the College of Education and Human Service (EHS) Office of Educator Preparation Programs for pre-admission advising.

## Other Degree Requirements

This coursework will provide a plan of study appropriate to a particular degree outside of the major and minor field(s).

## Specialized Studies (Major and Minor)

Majors and minor(s) (if any) have their own requirements. Each is detailed under the department that offers it. A list of all majors and minors offered and the degrees to which they are applicable can be located on page 144.

## Additional Majors and Minors Policy

Students may, after completing a baccalaureate degree from an accredited institution, attend Central Michigan University as a post-baccalaureate student to complete an additional major, minor, or certificate. Students must be admitted to CMU and declare the additional major, minor, or certificate with an advisor. When all coursework toward the additional major, minor, or certificate has been completed, a statement will be added to the student's transcript noting the completion of such major, minor, or certificate with the date of completion.

*(Approved by the Academic Senate, March 24, 2020)*

## Professional Studies Requirements and Electives

Several degrees contain a block of courses to satisfy professional studies requirements. An example may be found under the requirements for the B.S. in Education degree. Read these sections carefully and note their applicability to the degree plan that you have chosen.

Several degrees also contain electives which are blocks of credit hours that are completely unspecified. Students pursuing those degrees may elect to take courses in any department of the university to complete the minimum number of credit hours required for graduation.





## Bachelor of Arts (B.A.)

This degree indicates significant exploration and achievement in the liberal arts.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### World Language Requirement (0-16 hours)

Completion of the 202 course or higher in any world language, including American Sign Language (ASL). This requirement may also be satisfied by passing the 202 examination or equivalent. Courses used to fulfill this requirement may be double counted with the University Program Group IV-B.

### Specialized Studies

**Major:** Any major approved for offering on the Bachelor of Arts; see the major chart in this Bulletin.

**Minor:** Optional, however certain majors require a particular minor or one chosen from a list of acceptable minors. See departments for major requirements.

### Electives

The number of elective hours will vary depending upon the requirements for the major.

### Minimum Total for Graduation: 120 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation. Courses with an ECO designator are excluded.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*

## Bachelor of Applied Arts (B.A.A.)

This degree indicates achievement in one or more areas of applied knowledge.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Specialized Studies (50-100 hours)

#### Major in one of the following fields (30-72 hours):

Administration Major  
Advertising Major  
Art Major: Studio Concentration  
Broadcast & Cinematic Arts Major  
Child Development Major  
Commercial Music Major  
Communication Major  
Communication Sciences and Disorders Major  
Dance Studies Major  
Early Childhood Development and Learning Major  
Entrepreneurship Major  
Event and Recreation Management Major  
Exercise Science Major: Clinical Exercise Science Option  
Exercise Science Major: Health Fitness and Performance Option  
Exercise Science Major: Kinesiology Option  
Family Studies Major  
Fashion Merchandising and Design Major: Fashion Design Concentration  
Fashion Merchandising and Design Major: Fashion Merchandising Concentration  
Fashion Merchandising and Design Major: Product Development Concentration  
Fashion Merchandising and Design Major: Visual Merchandising Concentration  
Health Administration Major  
Integrative Public Relations  
Interior Design Major  
Journalism Major  
Journalism Major: Public Relations Concentration  
Organizational Leadership Major  
Outdoor and Environmental Recreation Major  
Photojournalism Major  
Physical Activity Specialist Major  
Public Health Education Major  
Recreational Therapy and Rehabilitation Major  
Sport Management Major  
Theatre and Interpretation Major

**Note:** Certain majors require a particular minor or one chosen from a list of acceptable minors. See departments for major requirements.

#### Minor in any university approved minor or internship (20-30 hours):

Internship must be 20-30 hours and sponsored by the department of the major. Administration and registration may be through related disciplines but the responsibility of the internship requirements, parameters, etc., must be that of the department of the major.

### Electives

The number of elective hours will vary depending upon the requirements for the major and minor. No more than 9 hours of electives taken from the same department as the student's major field will count towards graduation requirements.

### Minimum Total for Graduation: 120 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation. However, the 27 hour rule does not apply to Entrepreneurship majors.*
- *You should read the requirements for graduation in this Bulletin for a complete description.*

## Bachelor of Fine Arts (B.F.A.)

This degree indicates significant exploration and achievement in the fine arts. Students may either specialize professionally in a selected fine arts field or study extensively in one field while gaining a broad background in the other fine arts.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Specialized Studies (70-82 hours)

**Major** in one of the following:

- Art Major: Animation Concentration
- Art Major: Graphic Design Concentration
- Art Major: Studio Concentration
- Cinema Arts Major
- Music Theatre Major

**Minor:** optional

**OR**

**Major** (30-45 hours) in Theatre and Interpretation (TAI)

**Fine Arts Electives:** (25-40 hours) outside the major, authorized by the major advisor.

- Theatre & Interpretation Major, Acting/Directing Concentration
- Theatre & Interpretation Major, Design/Technical Theatre Concentration

**Minor:** optional

### Electives

The number of elective hours will vary depending upon the requirements for the major.

### Minimum Total for Graduation: 124 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*

## Bachelor of Individualized Studies (B.I.S.)

This degree is designed for those students whose goals and learning objectives require more flexibility than is provided by the more conventional structured programs. In consultation with a faculty advisor the student plans an academic program, which must be submitted to the Committee on Individualized Studies for approval. **Note:** This degree may not satisfy requirements for admission to some graduate programs or for professional employment.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Area Studies (18 hours)

In addition to University Program Requirements, 18 hours of area requirements must be met as follows:

- 6 hours in Humanities
- 6 hours in Natural Sciences
- 6 hours in Social Sciences.

### Specialized Studies

Major in Individualized Studies

### Minimum Total for Graduation: 120 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*

### Special procedures for earning this degree:

The B.I.S. student selects a faculty advisor who assists in planning an academic program that is submitted to the Committee on Individualized Studies for preliminary approval at least 45 semester hours before graduation. The program plan must include the goals and objectives of the course of study and methods of attaining them, including such things as senior papers and written and oral examinations.

A final plan, including a complete list of courses, must be approved by the Committee on Individualized Studies 30 semester hours prior to graduation.

Students are required to earn at least 30 of the final 45 semester hours of credit on the CMU campus.

Further information concerning the Individualized Studies Program, including the forms for applying for preliminary and final approval for the degree program, are available from the Office of Academic Effectiveness, Warriner 312 or call 989-774-3631 to arrange an appointment for guidance.



## Bachelor of Music (B.Mus.)

This degree is awarded upon completion of a professional program for students aspiring to careers in musical performance or composition.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Specialized Studies (89 hours)

**Major** in Music with a specific concentration:

- Music: Orchestral Instruments Major
- Music: Piano Major
- Music: Composition Major
- Music: Voice Major

A **minor** is optional.

### Electives

The number of elective hours will vary depending upon the hours completed in General Education.

### Minimum Totals for Graduation: 124 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*

## Bachelor of Music Education (B.Mus.Ed.)

Completion of this degree will qualify a student for recommendation to the Michigan State Board of Education for a Secondary Standard Certificate, which will permit the holder to teach music in grades K-12. All students pursuing this degree should see the section on Admission to Teacher Education Programs.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Other Degree Requirements (0-10 hours)

Courses selected outside the major or minor.

### Professional Education Requirements (28 hours)

EDU 107 - Exploring Education: Teaching as a Profession 3(3-1)  
 EDU 210 - Adolescent Development and Learning for Secondary Teachers 3(3-0)  
 EDU 432 - Student Teaching Seminar 3(3-0)  
 EDU 450 - Disciplinary Literacy 3(3-0)  
 EDU 458 - Student Teaching Internship 9(Spec)  
 EDU 495 - Foundations of Education 3(3-0)  
 SPE 504 - Teaching Students in Inclusive Settings 3(3-0)

### Specialized Studies (70 hours)

In order to complete this degree a student must major in Music Education with either the Instrumental, Choral, or General Music option. Both the major and the minor must be in the same option.

#### Majors:

Music Education Major: Choral Option  
 Music Education Major: Instrumental Option  
 Music Education Major: General Music Option

#### Minors:

Music: Choral Minor  
 Music: Instrumental Minor  
 Music: General Music Minor

**Note:** A minimum 2.7 GPA (B-) must be earned in all teaching majors and minors.

### Minimum Total for Graduation: 134 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *You must earn a minimum overall grade point average of 2.70 in order to graduate with the Bachelor of Music Education degree.*
- *Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*

## Bachelor of Science (B.S.)

This degree indicates significant exploration and achievement in the behavioral, health, natural, physical, or social sciences.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Natural and Social Sciences Requirements (0-13 hours)

A minimum of 9 credit hours of natural or social science (see list of designators below) at the 300-level or above are required; at least 6 credit hours from the same designator and no double counting with General Education. A minimum of 3-4 credit hours of statistics or calculus are required from the following: BIO 500, ECO 285, GEL 420, HSC 544, MTH 132, MTH 217, PAD 380QR, PSC 280QR, PSY 211, SOC 200, STA 282QR, 382QR, 392 (these may double count with General Education).

#### Social and Natural Designators:

ACT – Actuarial Science;  
 ANT – Anthropology;  
 AST - Astronomy;  
 BIO - Biology;  
 CHM - Chemistry;  
 CPS – Computer Science;  
 CSD – Communication Sciences and Disorders;  
 ECO - Economics;  
 ENS – Environmental Science;  
 ENV - Environmental Studies;  
 ESC - Earth Science;  
 GEL - Geology;  
 GEO – Geography;  
 GRN – Gerontology;  
 HDF - Human Development & Family Studies;  
 HSC – Health Sciences;  
 HST - History;  
 ITC – Information Technology;  
 MET - Meteorology;  
 MTH - Mathematics;  
 NDS – Nutrition and Dietetics;  
 PAD - Public Administration;  
 PHS - Physical Science;  
 PHY - Physics;  
 SCI - Sciences;  
 PSC - Political Science;  
 PSY - Psychology;  
 SOC – Sociology;  
 STA – Statistics.

### Specialized Studies

#### Major:

Any major approved for offering on the Bachelor of Science; see the major chart in this Bulletin.

The major on the BS degree may include courses taken to satisfy other degree requirements.

#### Minor:

Optional; however, certain majors require a particular minor or one chosen from a list of acceptable minors. See departments for major requirements.

### Electives

The number of elective hours will vary depending upon the requirements for the major.

### Minimum Totals for Graduation: 120 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation. Courses with an ECO designator are excluded.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*

## Bachelor of Science (B.S.) With an Option in Community Development

The primary purpose of the Bachelor of Science with an Option in Community Development is to provide education for persons required to function effectively in various community organizations. The program allows for a general education, for a broad education in community development, and for the development of specialized expertise in specified professional fields.

### General Education Requirements (50 hours)

All students must complete 50 semester hours of work in general education which reflect each of the following (work may be demonstrated by successfully completing course work or other learning experiences for which college-level credit is granted):

- Insight and Appreciation
- Organization and Communication of Ideas
- Physical Environment and Biological Inheritance
- Social Inheritance and Responsibilities

### Areas of Study (24 hours)

Students must demonstrate competence in each of the following areas of study by successfully completing course work or other learning experiences for which college-level credit is granted.

- **Area 1** - The General Theory and Practice of Community
- **Area 2** - Interaction of Community Institutions in a Community Setting
- **Area 3** - Methods Appropriate for Studying Community Behavior and the Implementation and Evaluation of Community Programs
- **Area 4** - Organization Theory and Leadership, Interpersonal Relationships, Communication, and Group Dynamics

### Specialized Studies (12 hours)

#### Concentrations (see page 148-149)

Select one of the following concentrations:

- Community Development Option:  
Concentration in Public Administration
- Community Development Option:  
Concentration in Community Services
- Community Development Option:  
Concentration in Health Sciences

### Electives (34 hours)

The number of elective hours will vary depending upon the requirements for the option.

### Minimum Totals for Graduation: 120 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: The combination of some majors and minors may require more than 120 hours for graduation.*
- *No more than 27 hours may be taken from the College of Business Administration. These hours include both business transfer credits and credits earned at Central Michigan University.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*
- **Special procedures for earning this degree:**  
*Students must contact their assigned CEHS academic advisor prior to registering for any coursework in the BSCD program. The CEHS academic advisor will assist with developing an academic plan which includes courses to complete general education, the option in Community Development, a concentration and degree electives. Further information concerning the Option in Community Development is available through your academic advisor.*

## Bachelor of Science in Athletic Training (B.S.A.T.)

This degree is a part of the 3+2 B.S.A.T./M.S.A.T. program designed for incoming freshmen and transfer students who are interested in completing a master's degree in athletic training in five instead of six years. In order to receive the B.S.A.T., students must complete the M.S.A.T. requirements. See Athletic Training Major in the Bulletin for additional information.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Foundational Sciences I (4-5 hours)

Select from the following options:

#### Option 1 (5 hours)

CHM 120 - Survey of Chemistry 4(4-0)

CHM 127 - Introductory Chemistry Laboratory 1(0-2)

#### Option 2 (4 hours)

CHM 131 - General Chemistry I 4(3-3)

### Foundational Sciences II (3-4 hours)

Select from the following:

PHY 100 - Conceptual Physics 3(3-0)

PHY 130QR - College Physics I 4(4-0)

### Foundational Sciences III (3 hours)

Select from the following:

HSC 212 - Applied Anatomy and Kinesiology 3(3-1)

HSC 216 - Biomechanics and Kinesiology 3(2-2)

### Foundational Sciences IV (20 hours)

BIO 101 - General Biology 3(2-2)

HSC 201 - Medical Terminology 3(3-0)

HSC 214 - Human Anatomy 4(3-3)

HSC 215 - Human Physiology 4(3-2)

HSC 308 - Physiology of Sport and Exercise 3(3-0)

NDS 370 - Nutrition 3(3-0)

### Quantitative Literacy (3 hours)

Select from the following:

PSY 211QR - Introduction to Psychological Statistics 3(3-0)

STA 282QR - Introduction to Statistics 3(3-0)

### Behavioral Science and Cultural Perspective (12 hours)

HSC 317 - Community Health 3(3-0)

HSC 532 - Diversity Issues in the Health Professions 3(3-0)

PSY 100 - Introduction to Psychology 3(3-0)

PSY 220 - Developmental Psychology 3(3-0)

### Specialized Studies (55 hours)

**Major:** Athletic Training Major

**Minor:** Optional

### Electives

The number of elective hours will vary depending upon the hours needed to complete the general education program and degree requirements.

### Minimum Totals for Graduation: 122 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*
- *To earn a B.S.A.T. degree, students must complete requirements of the M.S.A.T. degree. See the Graduate Studies Bulletin for more information.*



## Bachelor of Science in Business Administration (B.S.B.A.)

This degree provides professional preparation for students aspiring to administrative careers in business, industry, and government.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students with an interest in business will complete an application during New Student Orientation. This application will be reviewed each semester to monitor progress toward admission to the Bachelor of Science in Business Administration (B.S.B.A.) degree in the College of Business Administration.

#### Admission Requirements

Admission will be granted to students who earn:

1. At least 24 credits with a minimum cumulative CMU grade point average of 2.50.
2. Grade point average of a minimum 2.0 in the following four courses: BUS 100, BUS 102, ECO 202, MTH 107.

**Note:** MTH 107 may be waived upon the results of CMU mathematics placement at the MTH 217 or MTH 132 level or upon earned credit in MTH 130, MTH 217 or MTH 132.

#### Additional Requirements

1. Students earning the B.S.B.A. degree should consult with their academic advisor to learn about requirements for the degree. Contact Business Student Services in Grawn 113 or by calling 989-774-3124 for additional information.
2. Students must earn admission to the B.S.B.A. degree to enroll in most courses on their major. When admission is listed as a pre-requisite for a course, having a course listed on a declared major or minor does not waive the admission prerequisite for B.S.B.A. degree earners.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Degree Requirements I (26 hours)

ACC 250 - Introduction to Financial Accounting 3(3-0)  
 ACC 255 - Managerial Accounting and Decision Making 3(3-0)  
 BIS 101WI - Essential Business Communication Skills 3(3-0)  
 BIS 255 - Information Systems 3(3-0)  
 BLR 202 - Legal Environment of Business 3(3-0)  
 BUS 102 - Teamwork in Business 1(1-0)  
 BUS 202 - Leading through Change 1(1-0)  
 ECO 201 - Principles of Macroeconomics 3(3-0)  
 ECO 202 - Principles of Microeconomics 3(3-0)  
 MGT 258 - Effective Management of Human Resources in Organizations 3(3-0)

### Degree Requirements II (0-3 hours)

MTH 107 - College Algebra 3(3-0)

**Note:** MTH 107 may be waived upon the results of CMU mathematics placement at the MTH 217 or MTH 132 level, or upon earned credit in MTH 130, MTH 132, or MTH 217.

### Degree Requirements III (3 hours)

Select one of the following:

STA 282QR - Introduction to Statistics 3(3-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

### Degree Requirements IV (10 hours)

BUS 302 - Career Management 1(1-0)  
 BUS 331 - Integrated Business Experience 3(2-1)  
 FIN 332 - Managerial Finance 3(3-0)  
 PHL 318 - Business Ethics 3(3-0)

### Integrated Business Core (9 hours)

BUS 321 - Spreadsheet-Based Data Analysis for Business 3(3-0)  
 MGT 311/MKT 311 - Operations and Supply Chain Management 3(3-0)  
 MKT 301 - Integrated Marketing Principles 3(3-0)

### Specialized Studies (30-39 hours)

**Major in one of the following:**

Accounting Major  
 Economics Major  
 Finance Major  
 General Business Administration Major: Applied Business Communication Concentration)  
 General Management Major  
 Hospitality Services Administration Major: Hospitality Services Concentration  
 Human Resources Management Major  
 Information Systems Major  
 International Business Major  
 Law and Economics Major  
 Logistics Management Major  
 Marketing Major - General  
 Marketing Major - Professional Sales Concentration  
 Personal Financial Planning Major  
 Purchasing & Supply Management Major  
 Real Estate: Development and Finance Major

**Minor:** Optional

### Electives

The number of elective hours will vary depending upon the requirements for the degree and the major.

### Minimum Totals for Graduation: 120 hours

- To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- You should read the Requirements for Graduation in this Bulletin for a complete description.

## Bachelor of Science in Education (B.S. in Ed.)

### Standard Certificate (Early Childhood and Elementary Education)

Completion of this degree will qualify a student for recommendation to the Michigan State Board of Education for a Standard Certificate, which will permit the holder to teach in the corresponding levels of the major.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Degree Requirements

All of the courses below (except EDU 107, HDF 100, SPE 250, TEL 300, and TEL 301) require students to be admitted to the teacher education program. Students cannot continue in the education program until each previous EDU/SPE course is completed with a C+ or better (Note: EDU 107 requires a B or higher). SPE 557, EDU 432 and EDU 458 may be taken at any point after the course prerequisites are met.

Read carefully the section on *Standards Leading to Teacher Certification* for additional requirements.

#### Specific Course Requirements I (9 hours)

EDU 107 - Exploring Education: Teaching as a Profession 3(3-1)  
HDF 100 - Lifespan Development 3(3-0)  
SPE 250 - Reaching and Teaching Diverse Learners 3(Spec)

**Note:** HDF 100 may double count in the University Program.

#### Specific Course Requirements II (3 hours)

Select one of the following:

**Note:**

*Majors in PK-3, 3-6 or PK-6: select EDU 432.*

*Majors in B-K and B-3: select SPE 557.*

EDU 432 - Student Teaching Seminar 3(3-0)  
SPE 557 - Early Childhood Special Education Seminar 3(3-0)

#### Specific Course Requirements III (3-9 hours)

Select one of the following:

**Note:**

*Majors in PK-3, 3-6 and PK-6: select EDU 458.*

*Majors in B-K and B-3: select SPE 558.*

EDU 458 - Student Teaching Internship 9(Spec)  
SPE 558 - Early Childhood Special Education Clinical Experience 3(Spec)

#### Specific Course Requirements IV (3 hours)

Select one of the following:

**Notes:**

A major in Teaching Early Childhood B-K & Early Childhood Special Education major may select TEL 300 only.

A major in Teaching Early Childhood B-3 & Early Childhood Major may select either course.

All other majors should select TEL 301.

TEL 300 - Teaching Multilingual Learners: Birth-Grade 1 3(3-0)

TEL 301 - Teaching Multilingual Learners: Grades PK-6 3(3-0)

### Specialized Studies

Select one of the following options:

#### Option 1 (One Major)

Select one major from Majors I. **Note:** This option does not apply to Special Education (Cognitive or Emotional Impairment) majors.

#### Option 2 (Special Education [Cognitive or Emotional Impairment] only - Two Majors)

Select one Special Education Major (Cognitive or Emotional Impairment) from Majors I AND one Teaching major with Special Education from Majors II.

**Note:** *Teaching English Learners Minor* may be added to any major listed above.

#### Majors I

**Note:** Special Education (Cognitive or Emotional Impairment) Majors must also pick a major from Majors II.

- Special Education Major: Teachers of Students with Cognitive Impairment
- Special Education Major: Teachers of Students with Emotional Impairment
- Teaching Early Childhood B-3 & Early Childhood Special Education Major
- Teaching Early Childhood, B-K & Early Childhood Special Education Major
- Teaching Grades 3-6 Major
- Teaching Grades PK-3 Major
- Teaching Grades PK-6 Major

#### Majors II (with Special Education Major only)

- Teaching Grades 3-6 with Special Education Major
- Teaching Grades PK-3 with Special Education Major

#### Minor (Optional)

- Teaching English Learners Minor

### Minimum Totals for Graduation: 120 hours

- To graduate from CMU, you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.
- You must earn a minimum overall grade point average of 2.70 in order to graduate with the Bachelor of Science in Education degree.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.
- **Note:** Early advisement and planning are necessary to be able to complete this degree with as few hours as possible.

## Bachelor of Science in Education (B.S. in Ed.)

### Secondary Standard Certificate

Completion of this degree will qualify a student for recommendation to the Michigan State Board of Education for a Standard Certificate, which will permit the holder to teach corresponding levels of the major.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Degree Requirements

All of the courses below (except EDU 107, EDU 255, SPE 250, SPE 504, and TEL 302) require students to be admitted to the teacher education program. Students cannot continue in the education program until each previous EDU course is completed with a C+ or better (Note: EDU 107 requires a B or higher).

Read carefully the section on *Standards leading to Teacher Certification* for additional requirements.

#### Human Development (3 hours)

EDU 210 - Adolescent Development and Learning for Teachers 3(3-0)

**Note:** EDU 210 also satisfies University Program Requirements.

#### Professional Education Requirements (36 hours)

EDU 107 - Exploring Education: Teaching as a Profession 3(3-1)

EDU 255 - Designing Learning Environments 3(3-0)

EDU 355 - Developing Effective Teaching Practices 3(3-0)

EDU 432 - Student Teaching Seminar 3(3-0)

EDU 450 - Disciplinary Literacy 3(3-0)

EDU 455 - Analyzing Teaching to Improve Student Learning 3(3-0)

EDU 458 - Student Teaching Internship 9(Spec)

SPE 250 - Reaching and Teaching Diverse Learners 3(Spec)

SPE 504 - Teaching Students in Inclusive Settings 3(3-0)

TEL 302 - Teaching Multilingual Learners: Grades 5-12 3(3-0)

**Note:** EDU 458 is required for 9 credit hours on this degree.

### Specialized Studies

Select one of the following options.

**Note:** the *Teaching English Learners Minor* may be added to any Option below.

#### Option 1 (Two Minors)

Select either Group 1 or Group 2.

##### Group 1

Teaching English Language Arts Grades 5-9 Minor

Teaching Mathematics Grades 5-9 Minor

##### Group 2

Teaching English Language Arts Grades 7-12 Minor

Teaching Mathematics Grades 7-12 Minor

##### Optional Third Minor

Teaching English Learners Minor

#### Option 2 (One Major)

Select a major:

##### Majors

Select one of the following:

Health and Physical Education Major\*

History Major\*\*

Integrated Science Major\*\*

Social Studies Major: Geography Concentration\*\*

*(requires a History Minor)*

Social Studies Major: Political Science Concentration\*\*

*(requires a History Minor)*

Teaching English Language Arts Grades 5-12 Major

Teaching Mathematics Grades 5-12 Major

\* *Grades K-12*

\*\* *Grades 6-12*

##### Minors:

Teaching English Learners Minor (*Optional*)

History Minor (*For Social Studies Majors*)

#### Option 3 (Two Majors)

##### Majors I

Select one of the following:

Special Education Major: Teachers of Students with Cognitive Impairment

Special Education Major: Teachers of Students with Emotional Impairment

##### Majors II

Select one of the following:

History Major\*\*

Integrated Science Major\*\*

Social Studies Major: Geography Concentration\*\* (*requires a History Minor*)

Social Studies Major: Political Science Concentration\*\* (*requires a History Minor*)

Teaching English Language Arts Grades 5-12 Major

Teaching Mathematics Grades 5-12 Major

\*\* *Grades 6-12*

##### Minors:

Teaching English Learners Minor (*Optional*)

History Minor (*For Social Studies Majors*)

**Option 4 (Major and Minor)****Majors**

Select one of the following:

Special Education Major: Teachers of Students with Cognitive Impairment

Special Education Major: Teachers of Students with Emotional Impairment

**Minors**

Select one of the following:

Teaching English Language Arts Grades 5-9 Minor

Teaching English Language Arts Grades 7-12 Minor

Teaching Mathematics Grades 5-9 Minor

Teaching Mathematics Grades 7-12 Minor

**Optional Second Minor:** Teaching English Learners Minor

**Minimum Totals for Graduation:****120 - 156 hours**

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: some degrees or the combination of some majors and minors may require more than 120 hours for graduation.*
- *You must earn a minimum overall grade point average of 2.70 in order to graduate with the Bachelor of Science in Education degree.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*
- **Note:** *Early advisement and planning are necessary to be able to complete this degree with as few hours as possible.*
- **Note for General Education:** *The Michigan State Board of Education requires a minimum of 40 hours of General Education for teacher certification. This includes University Program (UP) courses and Competencies.*



## Bachelor of Science in Computer Engineering (B.S.Cmp.E.)

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Mathematics & Science Requirements I (30 hours)

CPS 180 - Principles of Computer Programming 3(3-0)

MTH 132 - Calculus I 4(4-0)

MTH 133 - Calculus II 4(4-0)

MTH 175 - Discrete Mathematics 3(3-0)

MTH 233 - Calculus III 4(4-0)

PHY 145QR - University Physics I 4(4-0)

PHY 146 - University Physics II 4(4-0)

PHY 175 - University Physics Laboratory I 1(0-2)

STA 392 - Probability and Statistics for Engineers 3(3-0)

**Note:** MTH 132, PHY 175, and CPS 180 may also be used to fulfill University Program Requirements.

### Mathematics & Science Requirements II (3-6 hours)

Select one of the following options:

#### Option A

MTH 232 - Linear Algebra and Differential Equations 3(3-0)

#### Option B

MTH 223 - Linear Algebra and Matrix Theory 3(3-0)

MTH 334 - Differential Equations 3(3-0)

### Mathematics & Science Requirements III (4 hours)

CHM 141 - General Chemistry for Engineering Students 4(4-0)

### Specialized Studies (66 hours)

Major in Computer Engineering

(see the Index for more information)

A minor is optional.

### Minimum Totals for Graduation: 130 - 133 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the requirements for graduation in this Bulletin for a complete description.*
- *Note: Those who fail to submit CLEP or AP credit (for ENG 101) and pass the oral competency examination (for COM 101) will need to complete a minimum of 136 hours.*

## Bachelor of Science in Electrical Engineering (B.S.E.E.)

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Business Component - Required (3 hours)

BLR 202 - Legal Environment of Business 3(3-0)

**Note:** BLR 202 may also be used to fulfill University Program requirements.

### Mathematics & Science Requirements I (24 hours)

MTH 132 - Calculus I 4(4-0)

MTH 133 - Calculus II 4(4-0)

MTH 233 - Calculus III 4(4-0)

PHY 145QR - University Physics I 4(4-0)

PHY 146 - University Physics II 4(4-0)

PHY 175 - University Physics Laboratory I 1(0-2)

PHY 176 - University Physics Laboratory II 1(0-2)

STA 392 - Probability and Statistics for Engineers 3(3-0)

**Note:** Select only ONE of PHY 175 or 176, not both.

MTH 132 and PHY 175 may also be used to fulfill University Program requirements.

### Mathematics & Science Requirements II (3-6 hours)

Select one of the following options:

#### Option A

MTH 232 - Linear Algebra and Differential Equations 3(3-0)

#### Option B

MTH 223 - Linear Algebra and Matrix Theory 3(3-0)

MTH 334 - Differential Equations 3(3-0)

### Mathematics & Science Requirements III (4 hours)

CHM 141 - General Chemistry for Engineering Students 4(4-0)

### Specialized Studies (72 hours)

**Major** in Electrical Engineering (see the School of Engineering and Technology section for more information).

**Minor** is optional.

### Minimum Totals for Graduation: 130 - 133 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*
- **Note:** *Those who fail to submit CLEP or AP credit (for ENG 101) and pass the oral competency examination (for COM 101) will need to complete a minimum of 136 hours.*

## Bachelor of Science in Engineering Technology (B.S.E.T.)

This degree prepares graduates with knowledge, problem solving ability, and hands-on skills to enter careers in the design, installation, testing, evaluation, technical sales, or maintenance of engineering systems. This degree provides students with an opportunity to pursue an approved major in Industrial Engineering Technology, Mechanical Engineering Technology, or Product Design Engineering Technology within the School of Engineering and Technology.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Basic Science and Mathematics Requirements (18-22 hours)

All students pursuing a degree in engineering technology must complete the following basic science and mathematics requirements.

#### Core Courses I (8 hours)

MTH 130 - Pre-Calculus Mathematics 4(4-0)

MTH 132 - Calculus I 4(4-0)

**Note:** MTH 130 may be waived upon the results of the mathematics placement examination or permission of a mathematics advisor.

#### Core Courses II (5 hours)

Select one of the following options:

##### Option 1

PHY 130QR - College Physics I 4(4-0)

PHY 170 - College Physics Laboratory I 1(0-2)

##### Option 2

PHY 145QR - University Physics I 4(4-0)

PHY 175 - University Physics Laboratory I 1(0-2)

#### Core Courses III (5 hours)

Select one of the following options:

##### Option 1

PHY 131 - College Physics II 4(4-0)

PHY 171 - College Physics Laboratory II 1(0-2)

##### Option 2

PHY 146 - University Physics II 4(4-0)

PHY 176 - University Physics Laboratory II 1(0-2)

#### Core Courses IV (4 hours)

CHM 141 - General Chemistry for Engineering Students 4(4-0)

**Note:** The following courses may be used according to rules regarding University Program Requirements: MTH 132, PHY 130QR, PHY 170, PHY 175.

### Specialized Studies (69-72 hours)

All students must pursue an approved major in Industrial Engineering Technology, Mechanical Engineering Technology, or Product Design Engineering Technology within the School of Engineering and Technology.

A minor is optional. Students who wish to complete a minor are encouraged to select Computer Science, Industrial Technology, Mathematics, or Physics.

#### Majors:

Industrial Engineering Technology

Mechanical Engineering Technology Major

Product Design Engineering Technology

### Electives

The number of elective hours will vary depending upon the requirements for the degree and major.

### Minimum Total for Graduation: 120 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*

## Bachelor of Science in Environmental Engineering (B.S.Env.E.)

### General Education Program Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Mathematics and Science Requirements (38-41 hours)

#### Required Courses I - Mathematics (12 hours)

MTH 132 - Calculus I 4(4-0)

MTH 133 - Calculus II 4(4-0)

MTH 233 - Calculus III 4(4-0)

#### Required Courses II - Mathematics (3-6 hours)

Select one of the following options:

##### Option 1 (3 hours)

MTH 232 - Linear Algebra and Differential Equations 3(3-0)

##### Option 2 (6 hours)

MTH 223 - Linear Algebra and Matrix Theory 3(3-0)

MTH 334 - Differential Equations 3(3-0)

#### Required Courses III - Statistics & Probability (3 hours)

STA 392 - Probability and Statistics for Engineers 3(3-0)

#### Required Courses IV - Physics (9 hours)

PHY 145QR - University Physics I 4(4-0)

PHY 146 - University Physics II 4(4-0)

PHY 175 - University Physics Laboratory I 1(0-2)

#### Required Courses V - Chemistry (5-8 hours)

Select one of the following options:

##### Option 1 (8 hours)

CHM 131 - General Chemistry I 4(3-3)

CHM 132 - General Chemistry II 4(3-3)

##### Option 2 (5 hours)

CHM 141 - General Chemistry for Engineering Students 4(4-0)

CHM 142 - Introduction to Chemistry Lab 1(0-3)

#### Required Courses VI - Biology (3 hours)

BIO 105QR - Introductory Quantitative Biology 3(2-2)

#### Required Courses VII - Geology (3 hours)

GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)

### Specialized Studies (63 hours)

**Major** in Environmental Engineering (see the School of Engineering and Technology section for more information).

**Minor** is optional.

### Electives

The number of electives will vary depending upon the requirements for the degree and major.

### Minimum Total for Graduation: 131 hours

- *To graduate from CMU, you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the requirements for graduation in this Bulletin for a complete description.*
- *Note: Those who fail to submit CLEP or AP credit (for ENG 101) and pass the oral competency examination (for COM 101) will need to complete a minimum of 137 hours.*



## Bachelor of Science in Mechanical Engineering (B.S.M.E.)

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Business Component - Required (3 hours)

BLR 202 - Legal Environment of Business 3(3-0)

**Note:** BLR 202 may also be used to fulfill University Program requirements.

### Mathematics & Science Requirements I (24 hours)

MTH 132 - Calculus I 4(4-0)

MTH 133 - Calculus II 4(4-0)

MTH 233 - Calculus III 4(4-0)

PHY 145QR - University Physics I 4(4-0)

PHY 146 - University Physics II 4(4-0)

PHY 175 - University Physics Laboratory I 1(0-2)

STA 392 - Probability and Statistics for Engineers 3(3-0)

#### Notes:

- MTH 132 and PHY 175 may also be used to fulfill University Program requirements.

### Mathematics & Science Requirements II (3-6 hours)

Select one of the following options:

#### Option A

MTH 232 - Linear Algebra and Differential Equations 3(3-0)

#### Option B

MTH 223 - Linear Algebra and Matrix Theory 3(3-0)

MTH 334 - Differential Equations 3(3-0)

### Mathematics & Science Requirements III (4 hours)

CHM 141 - General Chemistry for Engineering Students 4(4-0)

### Specialized Studies (72 hours)

**Major** in Mechanical Engineering (see the School of Engineering and Technology section for more information).

**Minor** is optional.

### Minimum Totals for Graduation: 130 - 133 hours

- *To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- *No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- *You should read the Requirements for Graduation in this Bulletin for a complete description.*
- **Note:** *Those who fail to submit CLEP or AP credit (for ENG 101) and pass the oral competency examination (for COM 101) will need to complete a minimum of 136 hours.*

## Bachelor of Science in Nursing (B.S.N.)

This degree is a post-licensure (RN) completion program. See the School of Rehabilitation and Medical Sciences, Nursing major for additional information.

### General Education Program Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Degree Requirements

#### Requirement I (45 hours)

Registered Nurse (RN) - An active unencumbered RN license within the state the applicant resides. See *Admission Requirements for the Nursing Major*.

**Note:** Upon successful completion of all requirements of the major, 10 of the 45 credit hours awarded for an active unencumbered RN license will be equivalent to the CMU 300 level.

#### Other Requirements (3 hours)

STA 282QR - Introduction to Statistics 3(3-0)

**Note:** This course can be transferred. See *Transfer Credit Evaluation* in the Undergraduate Bulletin.

### Specialized Studies (30 hours)

Major in Nursing.

A minor is optional. Contact the Director of Nursing for other minor options.

### Electives

The number of elective hours will vary depending upon the hours needed to complete the General Education program.

### Minimum Total for Graduation: 120 hours

To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above.

Please note: the combination of some majors and minors may require more than 120 hours for graduation.

Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.

No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.

You should read the *Requirements for Graduation* in this Bulletin for a complete description.

## Bachelor of Social Work (B.S.W.)

The Bachelor of Social Work degree program is accredited by the Council of Social Work Education and leads to eligibility for licensure as a licensed Bachelor's Social Worker in Michigan. A supervised experience and passage of an examination after graduation are required for licensure.

See the School of Politics, Society, Justice, and Public Service section for additional requirements for admission to the Social Work Program.

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 131-143.

### Other Degree Requirements I (3 hours)

Select one of the following:

HDF 100 - Lifespan Development 3(3-0)

PSY 220 - Developmental Psychology 3(3-0)

### Other Degree Requirements II (3 hours)

Select one of the following:

BIO 151 - Human Biology 3(3-0)

HSC 211 - Human Anatomy and Physiology 3(3-0)

### Other Degree Requirements III (3 hours)

Select one of the following:

CGL 145/IGR 145 - Racism and Racial Justice through Dialogue 3(3-0)

WGS 245/IGR 245 - Gender Identities in Dialogue 3(3-0)

### Specialized Studies (68-72 hours)

**Major:** Social Work (48 hours)

**Minor:** (20-24 hours) a student will select one of the following alternatives:

- Any University-approved minor or second major.
- 20 or more hours of coursework from at least two disciplines (not including required courses in Social Work) planned by a student with a Social Work advisor. These courses are intended to meet the student's individual learning objectives or to complement their professional interest. At least 9 hours must be at the 300 level or higher.

### Electives

The number of elective hours will vary depending upon the requirements for the degree and the major.

### Minimum Totals for Graduation: 124 hours

- To graduate from CMU you must complete a minimum of 120 hours, at least 40 of which must be in courses numbered 300 or above. Please note: the combination of some majors and minors may require more than 120 hours for graduation.*
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.*
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.*
- You should read the Requirements for Graduation in this Bulletin for a complete description.*

# General Education Program « Requirements

## I. Introduction

The General Education Program at Central Michigan University provides students with a common set of academic skills, referred to as Competencies, as well as exposure to a broad knowledge base, referred to as the University Program.

Courses in the General Education Program are continuous with the rest of the university curriculum but present material in a manner that links knowledge and skills with the 21st-century lives students will lead after they graduate.

Graduates of Central Michigan University demonstrate an understanding of the basic forces, ideas, and values that shape the world. They are aware of the structure of organized human knowledge—the arts and humanities, natural and social sciences. They can organize and access a broad knowledge base relevant to the modern world. They are skilled in working with others, including those of diverse ethnic and cultural backgrounds, and in thinking reflectively about themselves as individuals and as members of society. Graduates value rational inquiry, honesty in scholarship, and life-long learning.

### Specific Student Learning Objectives

The General Education Program is intended to assist students in attaining the specific learning outcomes listed below:

- A. Demonstrate undergraduate level competence in written communication, oral communication, mathematics, and quantitative reasoning.
- B. Examine and conceptualize contemporary problems through the application of procedures common in the natural sciences, social sciences, and humanities.
- C. Display sensitivity to the influence of cultural values and diversity on human functioning.

## II. The Competencies

General Education Competencies are important skills that students expand during their course of study at Central Michigan University. Graduates are expected to demonstrate adeptness in the areas of Writing, Oral English, and Mathematics/Quantitative Reasoning. The requirements under each of these competencies were developed to aid students in mastering skills deemed necessary to function as constructive, concerned, and thoughtful persons. See *Additional Guidelines* at the end of this section. Students with transfer credit should pay particular attention to material presented in Section IV: *General Education Program Requirements for Students with Transfer Credit*.

### A. Writing Competency (18-21 hours)

The Writing Competency requirement develops the ability to write clearly. Writing can be a tool for organizing and clarifying one's thoughts. Effective written expression is often necessary to contribute to ongoing debates or discussions in personal, civic, and vocational spheres. Students prepare a variety of public texts by applying knowledge of composing processes, rhetorical strategies, and textual conventions. Students must satisfy the *Freshman Composition*, *Intermediate Composition*, and *Writing Intensive* requirements as detailed below.

### 1. Freshman Composition (3-6 hours)

Students learn how to use composition techniques, strategies for persuasive writing, and modern writing conventions and practices to prepare a variety of papers.

**Timeline:** Students should enroll in a Freshman Composition course in their first or second semester, and continue to enroll until successfully completed **OR** successfully complete one of the examinations listed in Item c by the end of the first semester.

**Requirement:** Students satisfy the requirement for freshman composition during their first year of study at CMU. Student ACT or SAT scores and high school GPA can help shape how a student chooses to meet the Freshman Composition requirement. Most students may satisfy the Freshman Composition requirement in one of three ways:

- a. **Earning a grade of C (2.0) or better in ENG 101 Freshman Composition.** Students should enroll in ENG 101 Freshman Composition in either their first or second semester at CMU and continue to enroll in subsequent semesters until the requirement is satisfied.
- OR**
- b. **Earning a grade of C (2.0) or better in ENG 103 First Year Writing and ENG 193 Writing Workshop.** Students should enroll in ENG 103 in either their first or second semester at CMU and continue to enroll in subsequent semesters until the requirement is satisfied.
- OR**
- c. **Successful completion of a College Level Examination Program examination designated as meeting the Freshman Composition requirement by the end of their first semester at CMU or successful completion of the International Baccalaureate English Language Examination.** Specific information on these examinations, as well as information on the minimum scores required for Freshman Composition credit, can be obtained from the Certified Testing Center (<https://www.cmich.edu/ess/CBTC/Pages/default.aspx>) or call 989-774-1092. **Note to Transfer Students:** see Option D under *College-Level Examination Program (CLEP)* for more information (see index for page number).

**Freshman Composition Requirement for Non-native Speakers of English:** Students for whom English is not their native language may fulfill the Freshman Composition Requirement by earning a grade of C (2.0) or better in ELI 198 Freshman Composition for International Students.

**Freshman Composition Requirement for Students in the Honors Program:** Honors students may fulfill the Freshman Composition Requirement by earning a grade of C (2.0) or better in ENG 101H.

#### Freshman Composition Courses:

ELI 198 - Freshman Composition for International Students 3(3-0)  
 ENG 101 - Freshman Composition 3(3-0)  
 ENG 103 - First Year Writing 3(3-0)  
 ENG 193 - Writing Workshop 1(Spec)

### 2. Intermediate Composition (3 hours)

Students acquire writing skills necessary for writing in upper-level major courses and beyond.

**Timeline:** ENG 201 may be taken only after meeting the Freshman Composition Requirement and must be taken before completing 56 hours of coursework.

**Requirement:** This requirement is met by earning a grade of C or better in ENG 201 *Intermediate Composition*.

ENG 201 - Intermediate Composition 3(3-0)

(continued)



**3. Writing Intensive Requirement (WI) (12 hours)**

Writing Intensive courses in the University Program help students to learn course content, increase writing fluency, and to help prepare for more formal writing assignments. The purpose of Writing Intensive courses outside of the University Program is to provide practice with the language conventions, writing styles, and formats within a specific discipline or profession.

**Timeline:** Two of the four courses of the Writing Intensive requirement must be taken before completing 56 hours of coursework. The Writing Intensive requirement must be completely met prior to graduation. *Transfer Students, please see C. Additional Guidelines for Students with Transfer Credit, Item 3, at the end of this section.*

**Requirement:** Students are required to complete, with a grade of C (2.0) or better, four courses (12 credits) that have a Writing Intensive (WI) designation.

At least 6 hours of Writing Intensive coursework must be in the University Program, and 6 hours of Writing Intensive coursework may be fulfilled by courses outside of the University Program.

**Writing Intensive Courses:**

The following two groups of courses have been approved as Writing Intensive (check the Course Search and Registration for course sections indicated with a "WI" next to the course number). Some of these courses are also approved as UP Courses and are listed at the end of each subgroup for cross reference purposes.

**Writing Intensive Courses**

*The following courses are always offered as Writing Intensive:*

ANT 265WI - Medicine, Health and Illness: Why Culture Matters 3(3-0)  
 ANT/BIO/CHM 350WI - Water as Life, Death, Power 3(3-0)  
 ATR 390WI - Seminar in Athletic Training 3(3-0)  
 ATR 400WI - Research Methods and Evidence-Based Medicine 3(3-0)  
 ATR 478WI - Research Methods in Athletic Training 3(3-0)  
 ATR 500WI - Clinical Research I 3(3-0)  
 BCA 211WI - Writing for Multimedia 3(3-0)  
 BCA 311WI - Electronic Media Copywriting 3(3-0)  
 BCA 318WI - Electronic Media News Writing 3(3-0)  
 BCA 503WI - Critiquing Mass Media 3(3-0)  
 BCA 506WI - Writing for the Small Screen 3(3-0)  
 BCA 508WI - Writing the Feature-Length Screenplay 3(3-0)  
 BCA 540WI - Recording Industry & Business 3(3-0)  
 BIO 321WI - Introduction to Conservation Biology 3(3-0)  
 BIO 322WI - Freshwater Conservation 3(2-2)  
 BIO/ANT/CHM 350WI - Water as Life, Death, Power 3(3-0)  
 BIO 403WI - Undergraduate Research 3-4(Spec)  
 BIO 567WI - Biogeochemistry 3(3-0)  
 BIO 576WI - Mammalian Cell Culture 3(1-5)  
 BIS 101WI - Essential Business Communications Skills 3(3-0)  
 BIS 260WI - Global Business Communication 3(3-0)  
 BIS 360WI - Applied Business Communication 3(3-0)  
 CGL 496WI - Seminar in Cultural and Global Studies 3(3-0)  
 CHM/ANT/BIO 350WI - Water as Life, Death, Power 3(3-0)  
 CHM 491WI - Undergraduate Capstone Research and Thesis 1-3(Spec)  
 COM 301WI - Survey of Research in Communication 3(3-0)  
 COM 352WI - Communication and Social Influence 3(3-0)  
 CSD 432WI - Clinical Communication in Speech-Language Pathology 3(3-0)  
 EDU 380WI - Interdisciplinary Methods and Pre-Student Teaching 10(Spec)  
 EDU 381WI - Interdisciplinary Methods and Pre-Student Teaching (Science & SS), 3-6 6(Spec)  
 EGR 489WI - Senior Design I 3(2-2)  
 EGR 499WI - Senior Design II 3(1-4)  
 ENG 146WI - Race and Racism in American Literature 3(3-0)  
 ENG 211WI - Introduction to English Education 3(3-0)  
 ENG 234WI - Introduction to Literary Analysis 3(3-0)  
 ENG 294WI - Introduction to Creative Writing 3(3-0)

ENG 301WI - Nonfiction Writing 3(3-0)  
 ENG 303WI - Technical Writing 3(3-0)  
 ENG 324WI - Popular Culture in America 3(3-0)  
 ENG 381WI - Children's Literature 3(3-0)  
 ENG 391WI - Creative Writing: Fiction 3(3-0)  
 ENG 392WI - Creative Writing: Poetry 3(3-0)  
 ENG 402WI - Argumentation and Expository Writing 3(3-0)  
 ENG 435WI - Senior Seminar: Advanced Literary Analysis 3(3-0)  
 ENG 491WI - Advanced Fiction Writing 3-6(3-0)  
 ENG 493WI - Creative Nonfiction 3-6(3-0)  
 ENG 510WI - Writing Center Practicum 1-3(Spec)  
 ENS 401WI - Quantitative Environmental Data Analysis 3(2-2)  
 ENV 400WI - Environmental Studies Capstone 3(3-0)  
 FRN 321WI - France Today 3(3-0)  
 FRN 423WI - France at War in the 20th Century 3(3-0)  
 GEL 380WI - Hydrogeology 4(3-3)  
 GEL 406WI - Senior Thesis 3(Spec)  
 GEO 450WI - Geography Capstone 3(3-0)  
 HON 201WI - Honors Studies in Human Events and Ideas: First Year Seminar 3(3-0)  
 HON 202WI - Honors Studies in the Arts: First Year Seminar 3(3-0)  
 HON 203WI - Honors Descriptive Science: First Year Seminar 3(3-0)  
 HON 204WI - Honors Quantitative and Mathematical Science: First Year Seminar 3(3-0)  
 HON 205WI - Honors Behavioral Sciences: First Year Seminar 3(3-0)  
 HON 206WI - Honors Studies in Social Structures: First Year Seminar 3(3-0)  
 HON 207WI - Honors Studies in Global Cultures: First Year Seminar 3(3-0)  
 HON 208WI - Honors Studies in Racism and Diversity in the U.S.: First Year Seminar 3(3-0)  
 HON 209WI - Honors Studies in Discrimination in the U. S. 3(3-0)  
 HPE 215WI - Health and Physical Education Curriculum and Programming 3(3-0)  
 HPS 101WI - Introduction to the Health Professions 3(3-0)  
 HPS 350WI - Readiness: College-to-Career Transition 3(3-0)  
 HSC 203WI - Leadership for the Health Professions 3(3-0)  
 HSC 315WI - Critical Analysis of Contemporary Issues in Exercise and Health Science 3(3-0)  
 HSC 419WI - Community Health Assessment, Planning and Program Evaluation 3(3-0)  
 HSC 490WI - Kinesiology Capstone 3(3-0)  
 HSC 538WI - Development of Proposals and Reports in Health Administration 3(3-0)  
 HST 100WI - Reconstructing the Past: An Introduction to the Study of History 3(3-0)  
 HST 210WI - United States History through Michigan Eyes 3(3-0)  
 HST 222WI - Cherokees, Slaves and the Struggle for Racial Justice 3(3-0)  
 HST 331WI - Time Travelers for Social Justice 3(3-0)  
 HST 362WI - Revolutions in Latin America 3(3-0)  
 HST 496WI - Research Seminar 3(3-0)  
 IET 324WI - Product Design and Development 3(2-2)  
 IND 332WI - Human Shelter and Environment 3(3-0)  
 IND 339WI - Interior Design Studio III: Special User Groups 3(1-4)  
 IND 432WI - Seminar in Interior Design 3(3-0)  
 JRN 107WI - Literary Journalism 3(3-0)  
 JRN 202WI - Writing for the Mass Media 3(3-0)  
 JRN 205WI - Shaping the Media 3(3-0)  
 JRN 312WI - Reporting 3(3-0)  
 JRN 348WI - Business Journalism 3(3-0)  
 JRN 417WI - Sports Reporting 3(3-0)  
 JRN 430WI - Magazine and Feature Writing 3(3-0)  
 JRN 450WI - Public Relations Writing 3(3-0)  
 JRN 516WI - Public Affairs Reporting 3(3-0)  
 JRN 551WI - Case Studies in Public Relations 3(3-0)  
 MET 320WI - Physical Meteorology 3(3-0)

MET 580WI - Atmospheric Modeling 3(2-2)  
 MSA 530WI - Foundations of Wellness Administration 3(3-0)  
 MSA 573WI - Workplace Violence: Awareness and Prevention 3(3-0)  
 MUS 314WI - History of Symphonic Literature 3(3-0)  
 NDS 374WI - Nutrition in the Life Cycle 3(3-0)  
 NDS 375WI - Nutrition and Performance 3(3-0)  
 NDS 475WI - Nutritional and Herbal Supplements 3(3-0)  
 NUR 300WI - Introduction to Baccalaureate Nursing Practice 3(3-0)  
 NUR 390WI - Concepts of Culture and Diversity 3(3-0)  
 PAD 523WI - Fundamentals of Grand Writing and Management 3(3-0)  
 PES 564WI - Sport Governance: Ethics, Morals, & Values 3(3-0)  
 PHL 490WI - Senior Seminar in Philosophy 3(3-0)  
 PHY 491WI - Senior Physics Project 3(Spec)  
 PHY 578WI - Experimental Physics 3(1-5)  
 PSC 571WI - The Military and Politics 3(3-0)  
 REL 501WI - Seminar in the Study of Religion 3(3-0)  
 REL 505WI - Research Seminar 3(3-0)  
 RPL 580WI - Programming for Therapeutic Recreation 3(3-0)  
 SPE 550WI - Teaching Diverse Students in Educational Settings 3(3-0)  
 SPN 331WI - Advanced Grammar and Composition 3(3-0)  
 SPN 405WI - Modern and Contemporary Spanish Novel 3(3-0)  
 SPN 415WI - Spanish-American Novel 3(3-0)  
 SPN 431WI - Advanced Writing in Spanish 3(3-0)  
 SWK 331WI - Social Work Generalist Practice III 3(3-0)  
 TAI 175WI - The Art of Theatre: From "Hamlet" to "Hamilton" 3(3-0)  
 TAI 586WI - Playwriting 3(3-0)

### Approved for Writing Intensive Sections

*The following courses are approved for Writing Intensive; check the Course Registration for WI sections:*

ANT 170 - Culture & Human Experience: Introduction to Cultural Anthropology 3(3-0)  
 ANT 171 - Human Origins: Introduction to Biological Anthropology 3(3-0)  
 ANT 174 - Inequality in the Ancient World: Origins of Early States 3(3-0)  
 ANT 276 - Language, Identity, and Politics 3(3-0)  
 ANT 345 - Archaeology & Heritage Management 3(3-0)  
 ANT 358 - Plagues and Peoples 3(3-0)  
 ANT 459 - Anthropology of Religion 3(3-0)  
 ANT 465 - Capstone Experience in Anthropology 3(3-0)  
 ART 126 - Introduction to the Visual Arts 3(3-0)  
 ART 319 - The Methods of Art History 3(3-0)  
 ART 380 - Greek Art and Architecture 3(3-0)  
 ART 381 - Early Christian and Byzantine Art 3(3-0)  
 ART 383 - Modern Architecture 3(3-0)  
 ART 485 - Art after 1945 3(3-0)  
 ART 580 - Seminar in Ancient/Medieval Art History 3-6(3-0)  
 ART 581 - Seminar in Early Modern Art History 3-6(3-0)  
 ART 582 - Seminar in Modern and Contemporary Art History 3-6(3-0)  
 ART 586 - Special Topics in Art History 3-9(3-0)  
 BCA 350/WGS 350 - Women in Film 3(2-2)  
 BCA 351/WGS 351 - Queer Cinema 3(2-2)  
 BIO 240 - Conservation of Natural Resources 3(3-0)  
 BIO 325 - Biotechnology 3(1-5)  
 BIO 338 - Human Ecology 3(3-0)  
 BIO 518 - Animal Behavior 4(3-3)  
 BIO 544 - Developmental Biology 4(3-3)  
 BIO 545 - Molecular Genetics 3(3-0)  
 BIO 560 - Avian Ecology 3(2-3)  
 BIO 570 - Medical Cell Biology 3-4(Spec)  
 BIS 342 - Intercultural Business Communication Abroad 1-9(Spec)  
 BLR 170 - Legal Studies in Global Cultures 3(3-0)  
 BLR 202 - Legal Environment of Business 3(3-0)  
 BLR 222 - The Search for Racial Justice through Law 3(3-0)  
 BLR 235 - Business Law 3(3-0)  
 BLR 325 - Women and the Law 3(3-0)  
 BLR 328 - Employment Law and Discrimination 3(3-0)  
 BLR 330 - Real Estate Law 3(3-0)  
 BLR 365 - Native American Justice Through Law 3(3-0)  
 CGL 285 - Language and Foreign Accent Discrimination 3(3-0)  
 COM 277 - Video Games and Human Communication 3(3-0)  
 COM 527 - Political Communication 3(3-0)  
 COM 568 - Dating and Relating 3(3-0)  
 EDU 107 - Exploring Education: Teaching as a Profession 3(3-1)  
 EDU 290 - Technology in Education 3(3-0)  
 ENG 134 - Introduction to Literature 3(3-0)  
 ENG 141 - Comics, Graphic Novels, and Other Illustrated Texts 3(3-0)  
 ENG 142 - Literary Interpretation of Sport 3(3-0)  
 ENG 143 - Laughing Matters: Comedy and Satire 3(3-0)  
 ENG 144 - Monsters and Their Meanings 3(3-0)  
 ENG 145 - Bestsellers and Prize Winners 3(3-0)  
 ENG 175 - The Nature of Language 3(3-0)  
 ENG 204/SOC 204/WGS 204 - LGBTQ Identities 3(3-0)  
 ENG 315 - Teaching Writing in Elementary and Middle Schools 4(3-1)  
 ENG 323 - Fantasy and Science Fiction 3(3-0)  
 ENG 327/WGS 327 - Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 ENG 349 - Shakespeare 3(3-0)  
 ENG 492 - Advanced Poetry Writing 3-6(3-0)  
 ENG 514 - Language and Media Discourse 3(3-0)  
 ENG 539 - Seminar in Major Nonfiction Writers 3-9(Spec)  
 ENV 101 - Introduction to Environmental Studies 3(3-0)  
 FMD 250 - History of Modern Fashion 3(3-0)  
 FMD 252 - Dress and Culture 3(3-0)  
 FRN 201 - Intermediate French I 4(4-0)  
 FRN 202 - Intermediate French II 4(4-0)  
 FRN 325 - French Literature in Translation 3(3-0)  
 FRN 333 - Francophone Literature and Culture 3(3-0)  
 FRN 340 - Foreigners in France in the 20th and 21st Centuries 3(3-0)  
 FRN 353 - Youth Literature in French 3(3-0)  
 FRN 360 - Literature and Culture of Quebec 3(3-0)  
 FRN 375 - French/English Translation 3(3-0)  
 FRN 391 - Topics in French and Francophone Cultures 1-12(Spec)  
 GEL 370 - Structural Geology 3(2-3)  
 GEL 385 - Introductory Petroleum Geology 3(2-2)  
 GEL 397 - Independent Study 1-3(Spec)  
 GEL 523 - Advanced Petrology 3(2-3)  
 GEO 121 - Human Geography and Globalization 3(3-0)  
 GEO 400 - Geographic Education 3(2-2)  
 GEO 431 - Integrated Land Use Planning 3(3-0)  
 GER 325 - Modern German Literature in Translation 3(3-0)  
 GER 341 - German Cultural History I 3(3-0)  
 GER 342 - German Cultural History II 3(3-0)  
 GER 343 - Survey of German Literature I 3(3-0)  
 GER 344 - Survey of German Literature II 3(3-0)  
 GER 345 - Survey of German Literature III 3(3-0)  
 GER 347 - German Cultural History III 3(3-0)  
 HDF 100 - Lifespan Development 3(3-0)  
 HDF 205 - Teaching and Learning about Race in Early Childhood 3(3-0)  
 HDF 247 - Introduction to Gerontology 3(3-0)  
 HDF 308 - Theories of Child and Adolescent Development 3(3-0)  
 HDF 309 - Family and Community Partnerships in Early Childhood 3(3-0)  
 HDF 510 - Child Development Seminar: Promoting Resilience 3(3-0)  
 HON 499 - Senior Project 3-6(Spec)  
 HST 101 - The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)  
 HST 102 - The Development of Western Civilization: From 1700 to the Present 3(3-0)  
 HST 106 - Twentieth Century: Western World Issues 3(3-0)  
 HST 110 - The American Experience 3(3-0)  
 HST 111 - The Quest for Liberty: The United States to 1865 3(3-0)  
 HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)

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HST 120 - Unlikely Princesses: Women of World History 3(3-0)  
HST 160 - History of Game Design 3(3-0)  
HST 163 - The Latin American Experience 3(3-0)  
HST 168 - Modern East Asia 3(3-0)  
HST 176 - The African Experience 3(3-0)  
HST 200 - Medieval Civilization 3(3-0)  
HST 215 - The American Civil War: A House Divided 3(3-0)  
HST 221 - Growing Up in America 3(3-0)  
HST 226/WGS 226 - From Trials to Women's Liberation: Women in America 3(3-0)  
HST 236 - Babylon and Beyond: Ancient Civilizations of the Near/Middle East 3(3-0)  
HST 237 - Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)  
HST 238 - Ancient Greece and Rome 3(3-0)  
HST 255 - Beyond Rosie the Riveter: Selected Topics on Women and Work in United States History 3(3-0)  
HST 303 - The American Revolution 3(3-0)  
HST 320 - United States Social History to 1865 3(3-0)  
HST 321 - United States Social History since 1865 3(3-0)  
HST 323 - History of Native Americans 3(3-0)  
HST 324 - "Death is Better than Slavery": African American History to 1877 3(3-0)  
HST 325 - "By Any Means Necessary": African American History, 1877-Present 3(3-0)  
HST 330 - "We the People": U.S. Constitutional History 3(3-0)  
HST 341 - Renaissance and Reformation 3(3-0)  
HST 361/REL 361 - Sinners and Saints of Colonial Latin America 3(3-0)  
HST 375 - Continuity and Change in Contemporary Africa, 1960s to the Present 3(3-0)  
HST379/HUM340 - Race, Class and Power: South Africa in the 20th Century 3(3-0)  
HST 505 - Tudor England 3(3-0)  
HST 511 - Colonial British America 3(3-0)  
HST 513 - Era of the Early Republic, 1789-1825 3(3-0)  
HST 515 - Civil War and Reconstruction 3(3-0)  
HST 516 - Emergence of Modern America, 1877-1920 3(3-0)  
HST 522 - Indians of the Great Lakes Region 3(3-0)  
HST 537 - The Age of Cicero 3(3-0)  
HST 543 - Napoleon 3(3-0)  
HST 558 - Europe, 1914-1945 3(3-0)  
HST 576 - Colonialism in Africa, 1880s-1960s 3(3-0)  
HST 580 - Public History 3(3-0)  
HST 585 - Oral History 3(3-0)  
HUM 303 - Law and Society: Great Trials 3(3-0)  
HUM340/HST379 - Race, Class and Power: South Africa in the 20th Century 3(3-0)  
IND 238 - Design History and Precedent 3(3-0)  
JRN 207 - Video Games and Mass Communication 3(3-0)  
JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)  
JRN 380 - Racial and Cultural Diversity: Mass Media's Role 3(3-0)  
MGT 258 - Effective Management of Human Resources in Organizations 3(3-0)  
MKT 300 - Introduction to Marketing 3(3-0)  
MUS 114 - Listening Experience: Expand Your Playlist 3(3-0)  
MUS 115 - Music of the Caribbean: Salsa to Reggae 3(3-0)  
MUS 213 - Jazz: An American Art Form 3(3-0)  
MUS 310 - Music and the Mind 3(3-0)  
MUS 311 - Historical Survey of Music II 3(3-0)  
MUS 313 - Musics of the World 3(3-0)  
MUS 319 - Racism and Discrimination in Jazz History 3(3-0)  
NDS 271 - Food and Culture 3(3-0)  
NDS 370 - Nutrition 3(3-0)  
NDS 577 - Advanced Topics in Nutrition: Eating Disorders 3(3-0)  
PAD 210 - Introduction to Public Administration 3(3-0)  
PAD 211 - Introduction to Nonprofit Leadership 3(3-0)  
PAD 411 - Public Sector Human Resources 3(3-0)

PAD 413 - Organizational Leadership and Behavior 3(3-0)  
PES 301 - Exercise Psychology 3(3-0)  
PHL 100 - Introduction to Philosophy 3(3-0)  
PHL 102/REL 102 - The Meaning of Life 3(3-0)  
PHL 118 - Moral Problems 3(3-0)  
PHL 158 - Introduction to Environmental Ethics and Justice 3(3-0)  
PHL 218 - Ethical Theories 3(3-0)  
PHL 230 - Philosophy of Religion 3(3-0)  
PHL 313 - Justice, Human Rights, and the Philosophy of Nonviolence 3(3-0)  
PHL 320 Theory of Knowledge 3(3-0)  
PHL 335 - Philosophy of Psychology 3(3-0)  
PHL 397 - Special Topics 1-12(Spec)  
PHL 404 - Twentieth Century Philosophy 3(3-0)  
PHL 418 - Advanced Moral Philosophy 3(3-0)  
PHL 422 - Political and Social Philosophy 3(3-0)  
PHL 480 - Philosophy of the Arts 3(3-0)  
PHL 497 - Special Topics in Philosophy 1-12(Spec)  
PSC 100 - Introduction to Political Science 3(3-0)  
PSC 101 - Political Behavior 3(3-0)  
PSC 105 - Introduction to American Government and Politics 3(3-0)  
PSC 150 - Introduction to International Relations 3(3-0)  
PSC 261 - State and Local Government 3(3-0)  
PSC 347 - Europe and the European Union 3(3-0)  
PSC 381 - Slavery, Tyranny, Democracy: Classical Origins of Modern Ideas 3(3-0)  
PSC 515 - Comparative Public Policy 3(3-0)  
PSY 285 - Research Methods 3(3-0)  
PSY 385 - Applications of Research Methods 3(3-0)  
REL 101 - World Religions: An Introduction to the Study of Religion 3(3-0)  
REL 102/PHL 102 - The Meaning of Life 3(3-0)  
REL 130 - Religion in America 3(3-0)  
REL 140 - African-American Religion 3(3-0)  
REL 207/WGS 207 - Women in Religion 3(3-0)  
REL 222 - Religious Traditions of India 3(3-0)  
REL 235 - Religion and Social Issues 3(3-0)  
REL 240 - African-American Religion 3(3-0)  
REL 250 - Creation, Conquest, and Chaos: Introduction to the Old Testament 3(3-0)  
REL 260 - From Gospel to Apocalypse: Introduction to the New Testament 3(3-0)  
REL 302/WGS 302 - Witchcraft, Magic, and Occult Phenomena 3(3-0)  
REL 303/WGS 303 - Goddesses 3(3-0)  
REL 305 - Mysticism: Union with the Sacred 3(3-0)  
REL 313 - Christianity 3(3-0)  
REL 314 - Islam 3(3-0)  
REL 315 - Judaism 3(3-0)  
REL 334 - Death and Dying 3(3-0)  
REL 336 - Religion and Film 3(3-0)  
REL 337 - Rock 'n' Roll and Spirituality 3(3-0)  
REL 361/HST 361 - Sinners and Saints of Colonial Latin America 3(3-0)  
REL 377 - Sufism: Mystical Islam 3(3-0)  
REL 397 - Special Studies 1-9(Spec)  
RPL 312 - Disability in Southeast Europe 3(3-0)  
RPL 358 - Foundations of Outdoor and Environmental Education 3(3-0)  
RPL 430 - Planning Recreation Programs and Events 3(3-0)  
RPL 470 - Park and Natural Resource Management 3(3-0)  
RPL 545 - Marketing of Leisure Services 3(3-0)  
SOC 204/ENG 204/WGS 204 - LGBTQ Identities 3(3-0)  
SPE 210 - History of Disability 3(3-0)  
SPE 370 - Disability and Society 3(3-0)  
SPN 201 - Intermediate Spanish I 4(4-0)  
SPN 202 - Intermediate Spanish II 3(3-0)  
SPN 214 - Intermediate Conversation and Composition 3(3-0)  
SPN 285 - Language and Foreign Accent Discrimination 3(3-0)  
SPN 376 - Culture and Civilization of Spain 3(3-0)



SPN 377 - Culture and Civilization of Latin America 3(3-0)  
 SWK 450 - Social Welfare Policies and Services II 3(3-0)  
 WGS 100 - How Gender Affects Our Lives 3(3-0)  
 WGS 204/ENG 204/SOC 204 - LGBTQ Identities 3(3-0)  
 WGS 207/REL 207 - Women in Religion 3(3-0)  
 WGS 226/HST 226 - From Trials to Women's Liberation: Women in America 3(3-0)  
 WGS 302/REL 302 - Witchcraft, Magic, and Occult Phenomena 3(3-0)  
 WGS 303/REL 303 - Goddesses 3(3-0)  
 WGS 327/ENG 327 - Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 WGS 350/BCA 350 - Women in Film 3(2-2)  
 WGS 351/BCA 351 - Queer Cinema 3(2-2)

## B. Mathematics and Quantitative Reasoning Competency (6 hours)

The Mathematics/Quantitative Reasoning requirement develops the ability to understand and solve quantitative problems that arise in a variety of contexts.

### 1. Mathematics Requirement (3 hours)

Students learn tools for understanding patterns that appear in the sciences, as well as the humanities. Students apply algebra to solve quantitative problems.

**Timeline:** The Mathematics Requirement must be met before students have completed 56 hours of coursework.

**Requirement:** Student ACT or SAT scores, as well as past coursework in mathematics, can help students select the first course in mathematics. However, **MTH 150, MTH 151, MTH 152, MTH 250, or MTH 350 may not be used to satisfy the Mathematics Requirement, and a single course may not be used to meet both the Mathematics and Quantitative Reasoning Requirements.** A student may satisfy the Mathematics Requirement in one of two ways:

- Earning a grade of C (2.0) or better in ANY mathematics (MTH) or statistics (STA) course numbered 105 or above (excluding MTH 150, MTH 151, MTH 152, MTH 250, MTH 350), OR
- Successfully completing the Mathematics Competency Examination or any CLEP or AP examination approved for credit in a mathematics (MTH) or statistics (STA) course numbered higher than MTH 105 (excluding MTH 150, MTH 151, MTH 152, MTH 250, MTH 350).

### Mathematics Competency Examination

Students seeking to satisfy the Mathematics Requirement by successfully completing the Mathematics Competency Examination must pass the exam by the time they have completed 56 hours of academic credit at CMU. Students who transfer more than 36 credit hours to CMU may take the competency examination only during their first semester at CMU.

The Mathematics Competency Examination consists of 40 questions. The Mathematics Requirement is satisfied by an overall score of at least 80% on the test. Students will be allowed two retests. Students who fail to obtain an overall score of at least 80% are required to meet the Mathematics Requirement as previously described. The Mathematics Competency Examination is administered by the Certified Testing Center ([https://www.cmich.edu/office\\_provost/CIS/Testing-Center/Pages/default.aspx](https://www.cmich.edu/office_provost/CIS/Testing-Center/Pages/default.aspx)) or call 989-774-1092.

### Mathematics Competency Courses

Some of these courses are also approved for UP Subgroup II-B.

MTH 105 - Intermediate Algebra 3(3-0)  
 MTH 107 - College Algebra 3(3-0)  
 MTH 109 - Plane Trigonometry 3(3-0)  
 MTH 113 - Mathematics: A Modeling Approach 3(3-0)  
 MTH 130 - Pre-Calculus Mathematics 4(4-0)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 175 - Discrete Mathematics 3(3-0)  
 MTH 217 - Business Calculus 4(4-0)  
 MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 MTH 232 - Linear Algebra and Differential Equations 3(3-0)  
 MTH 233 - Calculus III 4(4-0)  
 MTH 261 - Algebra for Secondary Teachers 3(3-0)  
 MTH 296 - Special Topics in Mathematics 1-6(Spec)  
 MTH 332 - Introduction to Mathematical Proof 3(3-0)  
 MTH 334 - Differential Equations 3(3-0)  
 MTH 341 - College Geometry 3(3-0)  
 MTH 351 - Geometry for K-8 Mathematics Teachers 3(3-0)  
 MTH 362 - Problem-Based and Technology-Enhanced Geometry for Secondary Teachers 3(3-0)  
 MTH 363 - Problem-Based Probability and Statistics for Secondary Teachers 3(3-0)  
 MTH 397 - Independent Study 1-6(Spec)  
 MTH 434 - Methods of Applied Mathematics 3(3-0)  
 MTH 438 - Numerical Analysis I 3(3-0)  
 MTH 439 - Numerical Analysis II 3(3-0)  
 STA 282QR - Introduction to Statistics 3(3-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)  
 STA 392 - Probability and Statistics for Engineers 3(3-0)

### 2. Quantitative Reasoning Requirement (3 hours)

Quantitative reasoning involves the application of mathematics in applied contexts. The overarching goal is to establish a foundation for effective quantitative reasoning and problem-solving strategies that are useful for completing a program of study and relevant to the life activities of most people.

**Timeline:** The Quantitative Reasoning requirement must be met prior to graduation.

**Requirement:** Students are required to complete, with a grade of C (2.0) or better, 3 credits that have a Quantitative Reasoning (QR) designation. All approved courses have a "QR" designation in the Bulletin. **A single course may not be used to meet both the Quantitative Reasoning and Mathematics Requirements.**

### Quantitative Reasoning Courses:

The following courses have been approved for offering as Quantitative Reasoning:

BCA 265QR - Understanding Media Measurement 3(3-0)  
 BIO 105QR - Introductory Quantitative Biology 3(2-2)  
 BUS 300QR - Applied Business Statistics 3(3-0)  
 BUS 503QR - Applied Lean Six Sigma 3(3-0)  
 CHM 211QR - Quantitative Analysis 4(2-6)  
 CHM 265QR - Chemical Physical Science for Elementary Teachers 2(1-3)  
 DAS 150QR - Introduction to Data Science 3(2-2)  
 ECO 222QR - Behavioral Economics 3(3-0)  
 EGR 190QR - Digital Circuits 3(3-0)  
 ENG 274QR - Odd Words and Word Odds 3(3-0)  
 ENS 101QR - Of Earth and Us: Introduction to Environmental Science 3(2-2)  
 FIN 201QR - Personal Finance 3(3-0)  
 FIN 323QR - Intermediate Personal Finance 3(3-0)  
 FMD 325QR - Merchandising Mathematics & Spreadsheet Applications 3(3-0)  
 FMD 355QR - Textile Analysis 3(2-2)  
 GEO 203QR - Introduction to Geographic Information Science 3(2-2)

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HDF 214QR - Consumer Economics 3(3-0)  
 HDF 401QR - Quantitative Methods in Childhood Assessment 3(3-0)  
 HED 301QR - Social Class in Higher Education 3(3-0)  
 HSC 106QR - Healthy Lifestyles 3(2-1)  
 IET 181QR - Alternative Energy Analysis 3(2-2)  
 IET 223QR - Lean Six Sigma for Process Improvement 3(3-0)  
 IND 436QR - Lighting Design 3(2-2)  
 JRN 203QR - Information Gathering for the Mass Media 3(3-0)  
 MET 101QR - Our Changing Climate 3(2-2)  
 MTH 103QR - Quantitative Reasoning for Informed Citizens 3(3-0)  
 MTH 212QR/PHY 212QR/STA 212QR - Games, Science, and Probability 3(2-2)  
 PAD 380QR - Public Sector Research Methods 3(3-0)  
 PES 186QR - Principles of Physical Fitness for Lifelong Wellness 3(3-0)  
 PES 218QR - Sport Analytics 3(3-0)  
 PHL 141QR - Introduction to Logical Problem Solving 3(3-0)  
 PHL 145QR - Chances, Choices, and Everyday Reasoning 3(3-0)  
 PHS 151QR - Introductory Physical Science I 3(2-2)  
 PHS 265QR - Quantitative Physical Science 2(1-3)  
 PHY 105QR - Energy and Society: A Quantitative Perspective 3(3-0)  
 PHY 130QR - College Physics I 4(4-0)  
 PHY 145QR - University Physics I 4(4-0)  
 PHY 212QR/MTH 212QR/STA 212QR - Games, Science, and Probability 3(2-2)  
 PHY 247QR - Introduction to Modern Physics 3(3-0)  
 PSC 280QR - Introduction to Empirical Methods of Political Research 3(3-0)  
 PSY 211QR - Introduction to Psychological Statistics 3(3-0)  
 RPL 508QR - Budgeting & Funding for Leisure Service Agencies 3(3-0)  
 SEP 300QR - Sustainability and Environmental Policy 3(3-0)  
 SOC 150QR/SWK 150QR - Public Opinion, Social Sciences, and Social Welfare 3(3-0)  
 SOC 200QR - Introduction to Social Research and Analysis 3(3-0)  
 STA 103QR - Evidence-based Problem Solving in Modern Society 3(3-0)  
 STA 212QR/PHY 212QR/MTH 212QR - Games, Science, and Probability 3(2-2)  
 STA 282HQR - Introduction to Statistics 3  
 STA 282QR - Introduction to Statistics 3(3-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)  
 SWK 150QR/SOC 150QR - Public Opinion, Social Sciences, and Social Welfare 3(3-0)  
 TAI 350QR - Costume Fundamentals 3(3-0)

## C. Oral English Competency (3 hours)

The Oral English Competency develops the ability to interpret, compose, and present information in oral form to specific audiences.

**Timeline:** The Oral English Competency must be met before students complete 56 hours of coursework. Because of this timeline, students seeking to satisfy this requirement by successfully completing the Oral English Competency Examination must pass the exam by the time they have completed 56 hours of academic credit at CMU. Students who transfer 36 or more credit hours to CMU may take the Oral English Competency Examination prior to the conclusion of their first year of study at CMU.

**Requirement:** Past coursework in debate, speech, and oral communication can help to determine how students choose to meet the Oral English Competency. There are two ways students may satisfy the Oral English Competency:

1. **Earning a grade of C (2.0) or better in one of the following courses:** COM 101, COM 267, COM 269, COM 357, TAI 170, TAI 302 (see course titles and descriptions below).

### OR

2. **Earning a passing score on the Oral English Competency Examination.** The Oral English Competency Examination requires the development and delivery of a ten-to-fifteen minute public speech accompanied by a properly typewritten and detailed outline. The student delivers the speech, which is evaluated by a faculty member assigned to oversee the examination. Students receive written feedback, and students who receive unsatisfactory examination results will be allowed one retest. Students who fail twice are required to obtain a grade of C (2.0) or better in one of the Oral English Competency courses listed above.

**Testing Times.** The Oral English Competency Test will be given on the Friday prior to the beginning of fall and spring semester classes. If you are not on campus, please call the number below to make alternative testing arrangements.

To register for a test session, you must make a payment to Central Michigan University and complete the form below. Submit this registration form along with payment at least two weeks prior to the test date. Payments may be made through the Quikpay link: [https://quikpayasp.com/cmich/commerce\\_manager/payer.do?orderType=Oral%20English%20Competency%20Exam](https://quikpayasp.com/cmich/commerce_manager/payer.do?orderType=Oral%20English%20Competency%20Exam).

The examination is non-transferable. Guidelines, registration materials, and other information may be obtained by contacting the Department of Communication, 989-774-3177 or visiting the [website](#).

**Oral English Competency Requirement for Non-native Speakers of English:** Students for whom English is not their native language may fulfill the Oral English Competency Requirement by earning a grade of C (2.0) or better in ELI 199 American Language for International Students: Speech Component. (See description below)

### Oral English Competency Courses:

The following courses are approved for Oral English Competency. TAI 170 is also approved for UP Subgroup I-B.

COM 101 - Introduction to Communication 3(3-0)  
 COM 103 - Oral Communication in the Online Environment 3(3-0)  
 COM 267 - Introduction to Debate 3(3-0)  
 COM 269 - Practicum in Debate/Forensics 2-8(Spec)  
 COM 357 - Public Speaking 3(3-0)  
 ELI 199 - American Language for International Students: Speech Component 3(3-0)  
 TAI 170 - Oral Interpretation of Literature 3(3-0)  
 TAI 302 - Voice and Diction 3(3-0)

### D. Additional Guidelines for the Competencies

1. A student must meet the requirements in each of the competency areas described in the Undergraduate Bulletin under which the student graduates.
2. A student attempting to satisfy a specific competency requirement in a given academic year will use the method(s) and requirement(s) in their bulletin year.
3. A competency requirement in a specific area, once satisfied, remains valid until the student graduates.
4. If the chairperson of the department most directly concerned with a competency judges that a student has satisfied a competency requirement by means other than those described above, that chairperson will certify in writing to the Registrar that the student has satisfied the requirement. These competencies and departments include:
  - **Writing Competency** - Department of English Language and Literature;
  - **Oral English Competency** - Department of Communication or Department of Theatre and Dance;
  - **Mathematics & Quantitative Reasoning Competency** - Department of Mathematics.

## III. The University Program (27 hours)

Courses in the University Program introduce students to the major fields of human knowledge. A primary goal is to provide students with the conceptual tools necessary to provide order and meaning to the information acquired over the course of their lives. Courses included in the University Program were selected to aid students in developing a broad conceptual understanding that ultimately helps graduates function as concerned and thoughtful persons. Courses are identified by a three letter code, called a designator, as well as by a course number. Course designators refer to the areas of study. Each group is divided into at least two subgroups. Students are required to take at least one course from each subgroup to total 27 hours. This typically results in taking nine courses with different designators, but students have the option of repeating a designator once. A passing grade must be obtained in each course and students must maintain an overall average of C (2.0) or better in the University Program courses. See Additional Guidelines at the end of this section. Students with transfer credit should pay particular attention to material presented in Section IV: General Education Program Requirements for Students with Transfer Credit.

Two of the University Program courses must be used to earn at least six Writing Intensive credits. Course sections approved for Writing Intensive will be designated as WI sections in the Course Search and Registration. Courses counted as Writing Intensive must have a grade of C or better.

### A. Group I - Humanities (6 hours)

As a group, the humanities is defined as those areas of study that examine human experience and achievement in order for us to attain a deeper understanding of the essential characteristics of the human condition and human values. It emphasizes the importance of the study of our cultural and artistic heritage and the individuals, movements, and ideas that have shaped this heritage. Its basic methodologies analyze, critically evaluate, or interpret philosophical movements, historical events, works of art, religious practices and beliefs, and other important aspects of culture so we can understand them in their historical context and fully appreciate their significance. It encourages the recognition of different points of view about interpretations of human events, ideas, values, and artworks, and it debates the ultimate validity and significance of these. To satisfy the Humanities requirement, students must select one course from each of the two subgroups.

#### Subgroup I-A: Human Events and Ideas (3 hours)

Select from the following:

- ART 283 - Introduction to Western Art, Part I 3(3-0)
- ART 285 - Introduction to Western Art, Part II 3(3-0)
- ART 363 - History of Design: 1750-2010 3(3-0)
- BCA 101 - At the Movies: History and Analysis of the Cinema 3(2-2)
- ENG 144 - Monsters and Their Meanings 3(3-0)
- ENG 323 - Fantasy and Science Fiction 3(3-0)
- ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)
- ENG 381WI - Children's Literature 3(3-0)
- FRN 325 - French Literature in Translation 3(3-0)
- GER 325 - Modern German Literature in Translation 3(3-0)
- HON 201WI - Honors Studies in Human Events and Ideas: First Year Seminar 3(3-0)
- HST 101 - The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)
- HST 102 - The Development of Western Civilization: From 1700 to the Present 3(3-0)
- HST 110 - The American Experience 3(3-0)
- HST 120 - Unlikely Princesses: Women of World History 3(3-0)
- HST 200 - Medieval Civilization 3(3-0)
- HST 226/WGS 226 - From Trials to Women's Liberation: Women in

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America 3(3-0)  
 HST 238 - Ancient Greece and Rome 3(3-0)  
 HST 260 - Games, History, and Conflict 3(3-0)  
 HST 341 - Renaissance and Reformation 3(3-0)  
 HUM 303 - Law and Society: Great Trials 3(3-0)  
 JRN 107WI - Literary Journalism 3(3-0)  
 NDS 271 - Food and Culture 3(3-0)  
 PHL 100 - Introduction to Philosophy 3(3-0)  
 PHL 102/REL 102 - The Meaning of Life 3(3-0)  
 PHL 118 - Moral Problems 3(3-0)  
 PHL 218 - Ethical Theories 3(3-0)  
 PHL 230 - Philosophy of Religion 3(3-0)  
 PHL 325 - Philosophy of Mind 3(3-0)  
 PSC 275 - Great Political Thinkers 3(3-0)  
 PSC 371 - American Political Thought 3(3-0)  
 PSC 378 - Modern Democratic Theory 3(3-0)  
 PSC 381 - Slavery, Tyranny, Democracy: Classical Origins of Modern Ideas 3(3-0)  
 REL 101 - World Religions: An Introduction to the Study of Religion 3(3-0)  
 REL 102/PHL 102 - The Meaning of Life 3(3-0)  
 REL 130 - Religion in America 3(3-0)  
 REL 235 - Religion and Social Issues 3(3-0)  
 REL 250 - Creation, Conquest, and Chaos: Introduction to the Old Testament 3(3-0)  
 REL 260 - From Gospel to Apocalypse: Introduction to the New Testament 3(3-0)  
 REL 313 - Christianity 3(3-0)  
 REL 315 - Judaism 3(3-0)  
 REL 334 - Death and Dying 3(3-0)  
 SPN/WGS 325 - Telenovelas, Streaming Media and Hispanic/Latino Feminist Movements 3(3-0)  
 WGS 226/HST 226 - From Trials to Women's Liberation: Women in America 3(3-0)  
 WGS/SPN 325 - Telenovelas, Streaming Media and Hispanic/Latino Feminist Movements 3(3-0)  
**These I-A courses are approved for offering as WI:** ENG 144, ENG 323, ENG 381WI; FRN 325; GER 325; HON 201WI; HST 101, HST 102, HST 110, HST 120, HST 200, HST 226, HST 238, HST 341; HUM 303; JRN 107WI; NDS 271; PHL 100, PHL 118, PHL 218, PHL 230; PSC 381; REL 101, REL 130, REL 207, REL 235, REL 250, REL 260, REL 313, REL 315, REL 334; WGS 207, REL 226.

#### Subgroup I-B: The Arts (3 hours)

Select from the following:  
 ART 103 - Introduction to Studio Art 3(0-6)  
 ART 121 - From Memes to Masterpieces 3(3-0)  
 ART 126 - Introduction to the Visual Arts 3(3-0)  
 BCA 221 - Smartphone Storytelling 3(1-4)  
 BCA 300 - African and African American Film 3(3-0)  
 ENG 134 - Introduction to Literature 3(3-0)  
 ENG 141 - Comics, Graphic Novels, and Other Illustrated Texts 3(3-0)  
 ENG 142 - Literary Interpretation of Sport 3(3-0)  
 ENG 143 - Laughing Matters: Comedy and Satire 3(3-0)  
 ENG 145 - Bestsellers and Prize Winners 3(3-0)  
 ENG 160/HST 160 - History of Game Design 3(3-0)  
 ENG 234WI - Introduction to Literary Analysis 3(3-0)  
 ENG 326 - Never-Ending Stories: Adaptation across Media 3(3-0)  
 FMD 250WI - History of Modern Fashion 3(3-0)  
 HON 202WI - Honors Studies in the Arts: First Year Seminar 3(3-0)  
 HST 160/ENG 160 - History of Game Design 3(3-0)  
 HST 335 - History of the Rock and Roll Era 3(3-0)  
 HST 346 - The World of Versailles: Power and the Politics of Splendor in 17th- (3(3-0)  
 IND 238 - Design History and Precedent 3(3-0)  
 MUS 110 - Music in Society 3(3-0)

MUS 114 - Listening Experience: Expand Your Playlist 3(3-0)  
 MUS 116 - Music and Cartoons: Warner Brothers to Disney 3(3-0)  
 MUS 213 - Jazz: An American Art Form 3(3-0)  
 MUS 310 - Music and the Mind 3(3-0)  
 MUS 313 - Musics of the World 3(3-0)  
 TAI 170 - Oral Interpretation of Literature 3(3-0)  
 TAI 175WI - The Art of Theatre: From "Hamlet" to "Hamilton" 3(3-0)  
**These I-B courses are approved for offering as WI:** ART 126; ENG 134, ENG 141, ENG 142, ENG 143, ENG 145, 234WI; FMD 250; HON 202WI; IND 238; MUS 114, MUS 213, MUS 310, MUS 313; TAI 175WI.  
**Note:** TAI 170 may also count for Oral Competency.

## B. Group II - Natural Sciences (6 hours)

As a group the natural sciences explore and examine natural phenomena to establish basic principles concerning the material universe. Its approach includes, but is not limited to, the observation, identification, description, experimental investigation and theoretical explanation of natural phenomena. To these ends the scientific method is crucial, providing the rules for concept formation, conduct of observations and experiments, model-building, and validation of hypotheses by empirical means.

To satisfy the Natural Sciences requirement, students must select one course from each of the two subgroups. At least one of these courses must include a laboratory experience equivalent to at least one laboratory credit hour.

#### Subgroup II-A: Descriptive Sciences (3 hours)

Select from the following:

ANT 110 - Meet Your Ancestors and Other Distant Relatives 3(3-0)  
 ANT 171 - Human Origins: Introduction to Biological Anthropology 3(3-0)  
 ANT 173 - Laboratory in Biological Anthropology 1(0-2)  
 AST 111 - Astronomy 3(3-0)  
 AST 112 - Introduction to Astronomical Observations 1(0-2)  
 BIO 101 - General Biology 3(2-2)  
 BIO 110 - Concepts of Biology 4(3-3)  
 BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 BIO 151 - Human Biology 3(3-0)  
 BIO 165 - Life Science for Elementary Teachers 3(2-3)  
 BIO 229 - Nature Study 3(2-3)  
 BIO 240 - Conservation of Natural Resources 3(3-0)  
 CPS 101 - A First Byte of Computer Science 3(3-0)  
 GEL 100 - Introduction to Earth Systems 3(2-2)  
 GEL 101 - Physical Geology 3(3-0)  
 GEL 102 - Physical Geology Laboratory 1(0-2)  
 GEL 105 - Dangerous Planet 3(3-0)  
 GEL 205/GEO 205 - Oceanography 3(3-0)  
 GEL 230 - Prehistoric Life 3(3-0)  
 GEO 105 - Physical Geography 3(2-2)  
 GEO 120 - Digital Earth: Understanding Environmental Change Using Maps 3(3-0)  
 GEO 205/GEL 205 - Oceanography 3(3-0)  
 HON 203WI - Honors Descriptive Science: First Year Seminar 3(3-0)  
 MET 101QR - Our Changing Climate 3(2-2)  
 NDS 370 - Nutrition 3(3-0)

**These II-A courses satisfying the Group II laboratory requirements:** ANT 173, AST 112, BIO 101, BIO 110, BIO 111, BIO 165, BIO 229, GEL 100, GEL 102, GEO 105, MET 101QR.

**These II-A courses are approved for offering as WI:** ANT 171, BIO 240, HON 203WI.

#### Subgroup II-B. Quantitative and Mathematical Sciences (3 hours)

*It is recommended that the Mathematics Competency be completed before enrolling in a Subgroup II-B course.*

Select from the following:

BIO 105QR - Introductory Quantitative Biology 3(2-2)  
 CHM 101 - Armchair Chemistry 3(2-2)  
 CHM 112 - Chemistry and Society Laboratory 1(0-3)  
 CHM 120 - Survey of Chemistry 4(4-0)  
 CHM 127 - Introductory Chemistry Laboratory 1(0-2)  
 CHM 131 - General Chemistry I 4(3-3)  
 CPS 180 - Principles of Computer Programming 3(3-0)  
 CPS 190 - Introduction to Programming in Python 3(3-0)  
 DAS 150QR - Introduction to Data Science 3(2-2)  
 ENS 101QR - Of Earth and Us: Introduction to Environmental Science 3(2-2)  
 GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)  
 GEL 285/GEO 285 - Earth Systems Science for Elementary Teachers 3(2-2)  
 GEO 203QR - Introduction to Geographic Information Science 3(2-2)  
 GEO 285/GEL 285 - Earth Systems Science for Elementary Teachers 3(2-2)  
 HON 204WI - Honors Quantitative and Mathematical Science: First Year Seminar 3(3-0)  
 MET 140 - Severe and Unusual Weather 3(3-0)  
 MTH 113 - Mathematics: A Modeling Approach 3(3-0)  
 MTH 132 - Calculus I 4(4-0)  
 MTH/PHY/STA 212QR - Games, Science, and Probability 3(2-2)  
 PHL 140 - Introduction to Logic 3(3-0)  
 PHL 141QR - Introduction to Logical Problem Solving 3(3-0)  
 PHL 145QR - Reasoning and Probability 3(3-0)  
 PHS 101 - Survey of Physical Science 3(3-0)  
 PHS 151QR - Introductory Physical Science I 3(2-2)  
 PHY 100 - Conceptual Physics 3(3-0)  
 PHY 110 - Physics of Sports 3(3-0)  
 PHY 127 - Table Top Physics 1(0-2)  
 PHY 130QR - College Physics I 4(4-0)  
 PHY 170 - College Physics Laboratory I 1(0-2)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY/MTH/STA 212QR - Games, Science, and Probability 3(2-2)  
 GEL 285/GEO 285 - Earth Systems Science for Elementary Teachers 3(2-2)  
 STA/MTH/PHY 212QR - Games, Science, and Probability 3(2-2)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

**These II-B courses satisfy the Group II laboratory requirements:** BIO 105QR, CHM 101, CHM 112, CHM 127, CHM 131, ENS 101QR, GEL 130, GEL 285/GEO 285, PHS 151QR, PHY 127, PHY 170, PHY 175.

**This II-B course is approved for offering as WI:** HON 204WI.

**Mathematics Competency:** MTH or STA courses listed in Group II-B may also count for the Mathematics Competency Requirement if not counted for the QR requirement.

### C. Group III - Social Sciences (6 hours)

The social sciences are defined as those fields of knowledge and study that explore and examine the social dimension and, where appropriate, the physical environment of human life. In these studies, an attempt is made to understand the behavior of individuals, groups, and institutions and, where possible, to establish scientifically-valid propositions. To satisfy the Social Sciences requirement, students must select one course from each of the two subgroups.

#### Subgroup III-A: Behavioral Sciences (3 hours)

Select from the following:

ANT 202 - Sex and Gender Across the Globe 3(3-0)  
 ANT 276 - Language, Identity, and Politics 3(3-0)  
 ANT 380 - Culture, Art, and Community Engagement 3(3-0)  
 COM 261 - Communicating for Happiness and Wellness 3(3-0)  
 COM 264 - Communicating in Workplaces 3(3-0)  
 COM 361 - Interpersonal Communication 3(3-0)  
 CSD 130 - Normal Speech and Language Acquisition 3(3-0)  
 ECO 222QR - Behavioral Economics 3(3-0)  
 EDU 210 - Adolescent Development and Learning for Secondary Teachers 3(3-0)  
 HDF 100 - Lifespan Development 3(3-0)  
 HDF 247 - Introduction to Gerontology 3(3-0)  
 HON 205WI - Honors Behavioral Sciences: First Year Seminar 3(3-0)  
 IND 332WI - Human Shelter and Environment 3(3-0)  
 JRN 305 - Hackers: The History of Media Innovation 3(3-0)  
 PES 301 - Exercise Psychology 3(3-0)  
 PSC 101 - Political Behavior 3(3-0)  
 PSY 100 - Introduction to Psychology 3(3-0)  
 PSY 220 - Lifespan Developmental Psychology 3(3-0)  
 SOC 201 - Social Psychology 3(3-0)

**These III-A courses are approved for offering as WI:** ANT 276, HDF 100, HDF 247, HON 205WI, IND 332 WI, PES 301, PSC 101.

#### Subgroup III-B: Studies in Social Structures (3 hours)

Select from the following:

ANT 120 - Ancient Insights Into Current Crises 3(3-0)  
 ANT 170 - Culture & Human Experience: Introduction to Cultural Anthropology 3(3-0)  
 ANT 200 - Education and Culture 3(3-0)  
 ANT 265WI - Medicine, Health and Illness: Why Culture Matters 3(3-0)  
 ANT/BIO/CHM 350WI - Water as Life, Death, Power 3(3-0)  
 ANT 353 - Contested Boundaries: The US-Mexico Border 3(3-0)  
 BCA 265QR - Understanding Media Measurement 3(3-0)  
 BIO/ANT/CHM 350WI - Water as Life, Death, Power 3(3-0)  
 BLR 202 - Legal Environment of Business 3(3-0)  
 CGL 351 - Living in America: Social Structures in Latino Culture 3(3-0)  
 CGL 353 - Contested Boundaries: The US-Mexico Border 3(3-0)  
 CHM/ANT/BIO 350WI - Water as Life, Death, Power 3(3-0)  
 ECO 150 - Current Economic Problems 3(3-0)  
 ECO 201 - Principles of Macroeconomics 3(3-0)  
 ECO 202 - Principles of Microeconomics 3(3-0)  
 ENG 175 - The Nature of Language 3(3-0)  
 ENV 101 - Introduction to Environmental Studies 3(3-0)  
 FMD 252 - Dress and Culture 3(3-0)  
 GEO 121 - Human Geography and Globalization 3(3-0)  
 GEO 317 - Economic Geography 3(3-0)  
 HDF 212 - Families in Cultural Perspective 3(3-0)  
 HED 301QR - Social Class in Higher Education 3(3-0)  
 HON 206WI - Honors Studies in Social Structures: First Year Seminar 3(3-0)  
 HST 106 - Twentieth Century: Western World Issues 3(3-0)  
 HST 111 - The Quest for Liberty: The United States to 1865 3(3-0)  
 HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)

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HST 210WI - United States History through Michigan Eyes 3(3-0)  
 HST 221 - Growing Up in America 3(3-0)  
 HST 321 - United States Social History since 1865 3(3-0)  
 JRN 101 - Media and Society 3(3-0)  
 JRN 105 - Social Media in Society 3(3-0)  
 JRN 205WI - Shaping the Media 3(3-0)  
 JRN 207 - Video Games and Mass Communication 3(3-0)  
 PES 373 - Esport in Society 3(3-0)  
 PSC 100 - Introduction to Political Science 3(3-0)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)  
 PSC 150 - Introduction to International Relations 3(3-0)  
 PSC 151 - The U.S. and the World 3(3-0)  
 PSC 242 - Introduction to Comparative Politics 3(3-0)  
 PSC 261 - State and Local Government 3(3-0)  
 PSY 336 - Psychology of Work 3(3-0)  
 SOC 100 - Introductory Sociology 3(3-0)  
 SOC 205 - Social Justice in a Global Society 3(3-0)  
 SOC 221 - Social Problems 3(3-0)  
 SPE 210 - History of Disability 3(3-0)

**Note:** BLR 202 and ECO 201 may not be applied toward the University Program requirements if a student is earning the Bachelor of Science in Business Administration degree.

**These III-B courses are approved for offering as WI:** ANT 170, ANT 265WI, ANT 350WI, BIO 350WI, BLR 202, CHM 350WI, ENG 175, ENV 101, FMD 252, GEO 121, HON 206WI, HST 106, HST 111, HST 112, HST 210WI, HST 221, HST 321, JRN 205WI, JRN 207, PSC 100, PSC 105, PSC 150, PSC 261, SPE 210.

## D. Group IV - Studies in Discrimination, Culture and Diversity (9 hours)

This group focuses on forms of discrimination (IV-A: Studies in Discrimination), the exploration of cultures and societies outside of the United States (IV-B: Studies in Cultures Outside of the Anglo-American Tradition), and the history and continuing effects of racism for groups within the United States (IV-C: Studies in Racism and Cultural Diversity in the United States). To satisfy the Studies in Discrimination, Culture and Diversity requirement, students must select one option from each of Subgroups IV-A, IV-B and IV-C.

### Subgroup IV-A: Studies in Discrimination (3 hours)

Central Michigan University recognizes the potential of applied experiences to impart an understanding of social and/or political marginalization due to identities or shared traits other than race inside or outside the United States – including but not limited to sex, gender identity, sexual orientation, economic class, age, religion, or ability.

Therefore, three options are available for meeting the requirement for Subgroup IV-A: Studies in Discrimination:

**Option 1: Complete at least three credits of study in a CMU faculty-led course that involves interacting with one or more groups of people inside or outside the United States that experience social and/or political marginalization due to identities or shared traits other than race in the United States.** To have the course count for credit in Subgroup IV-A: *Studies in Discrimination*, the faculty member leading the seminar must have approval from the General Education Committee prior to the experience. Information on completing the application can be found on the General Education website ([https://www.cmich.edu/office\\_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx](https://www.cmich.edu/office_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx)).

**OR**

**Option 2: Complete three credits of applied coursework (e.g., internship, practicum, service-learning project) with one or more groups of people inside or outside the United States that experience social and/or political marginalization due to identities or shared traits other than race in the United States.** Students must sign up with a faculty member who oversees the experience and, after completing the course, submit the proposal for credit in Subgroup IV-A: *Studies in Discrimination* for evaluation by the General Education Committee. Information on completing the application can be found on the General Education Program website ([https://www.cmich.edu/office\\_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx](https://www.cmich.edu/office_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx)).

**OR**

**Option 3: Select from the following:**

ANT 174 - Inequality in the Ancient World: Origins of Early States 3(3-0)  
 ART 141/WGS 141 - The Self and Other in Photography 3(3-0)  
 ASL 100 - Introduction to the Deaf Community and Deaf Culture 3(3-0)  
 BCA 350/WGS 350 - Women in Film 3(2-2)  
 BCA 351/WGS 351 - Queer Cinema 3(2-2)  
 BLR 325 - Women and the Law 3(3-0)  
 BLR 328 - Employment Law and Discrimination 3(3-0)  
 CGL/SPN 285 - Language and Foreign Accent Discrimination 3(3-0)  
 COM 362/WGS 362 - Gender Communication 3(3-0)  
 CSD 230 - Introduction to Speech, Language, and Hearing Disabilities/Differences 3(3-0)  
 ENG 204/WGS 204/SOC 204 - LGBTQ Identities 3(3-0)  
 ENG 327/WGS 327 Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 ENV 300 - Environmental Justice: Race, Gender, Poverty 3(3-0)  
 FMD 280/WGS 280 - Queer Fashion 3(3-0)  
 GEO 360 - Gender and Geography in the Midst of Globalization 3(3-0)  
 HDF 213/WGS 213 - Introduction to Human Sexuality 3(3-0)  
 HED 274 - Gender in Higher Education 3(3-0)  
 HON 209WI - Honors Studies in Discrimination in the U. S. 3(3-0)  
 HON 320 - Discrimination and Diversity in the U.S. 3(Spec)  
 HST 254/WGS 254 - Women in European History 3(3-0)  
 HST 255 - Beyond Rosie the Riveter: Selected Topics on Women and Work in United States History 3(3-0)  
 HST 331WI - Time Travelers for Social Justice 3(3-0)  
 IGR 245/WGS 245 - Gender Identities in Dialogue 3(3-0)  
 MGT 357 - Women in Management 3(3-0)  
 MTH 104/WGS 104 - Women in STEM Fields 3(3-0)  
 PES 304 - Youth Sports and Diverse Learners 3(3-0)  
 PHL 128 - Philosophical Perspectives on Poverty & Economic Injustice 3(3-0)  
 PHL 158 - Introduction to Environmental Ethics and Justice 3(3-0)  
 PSC 326/WGS 326 - Women and Politics 3(3-0)  
 PSY 334/WGS 334 - Psychology of Women 3(3-0)  
 REL 207/WGS 207 - Women in Religion 3(3-0)  
 REL 302/WGS 302 - Witchcraft, Magic, and Occult Phenomena 3(3-0)  
 REL 303/WGS 303 - Goddesses 3(3-0)  
 RPL 110 - Experience of Disability & Social Marginalization 3(3-0)  
 SOC 204/WGS 204/ENG 204 - LGBTQ Identities 3(3-0)  
 SOC 302 - Social Inequality 3(3-0)  
 SOC/WGS 317 Sociology of Gender  
 SPE 370 - Disability and Society 3(3-0)  
 SPN/CGL 285 - Language and Foreign Accent Discrimination 3(3-0)  
 WGS 100 - How Gender Affects Our Lives 3(3-0)  
 WGS 104/MTH 104 - Women in STEM Fields 3(3-0)  
 WGS 141/ART 141 - The Self and Other in Photography 3(3-0)  
 WGS 204/ENG 204/SOC 204 - LGBTQ Identities 3(3-0)  
 WGS 207/REL 207 - Women in Religion 3(3-0)  
 WGS 213/HDF 213 - Introduction to Human Sexuality 3(3-0)  
 WGS 245/IGR 245 - Gender Identities in Dialogue 3(3-0)  
 WGS 254/HST 254 - Women in European History 3(3-0)  
 WGS 280/FMD 280 - Queer Fashion 3(3-0)

WGS 302/REL 302 - Witchcraft, Magic, and Occult Phenomena 3(3-0)  
 WGS 303/REL 303 - Goddesses 3(3-0)  
 WGS/SOC 317 Sociology of Gender  
 WGS 326/PSC 326 - Women and Politics 3(3-0)  
 WGS 327/ENG 327 Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 WGS 334/PSY 334 - Psychology of Women 3(3-0)  
 WGS 350/BCA 350 - Women in Film 3(2-2)  
 WGS 351/BCA 351 - Queer Cinema 3(2-2)  
 WGS 362/COM 362 - Gender Communication 3(3-0)

**These IV-A courses are approved for offering as WI:** BCA 350/WGS 350, BCA 351/WGS 351; BLR 325; CGL 285; ENG 204, ENG 327; HON 209WI; HST 254, HST 255, HST 331WI; PHL 158; PSC 326; REL 207, REL 302, REL 303; SOC 204; SPE 370; SPN 285; WGS 100, WGS 204, WGS 207, WGS 254, WGS 302, WGS 326, WGS 327.

**Subgroup IV-B: Studies in Cultures Outside of the Anglo-American Tradition (3 hours)**

Central Michigan University recognizes the potential for applied experiences to impart an understanding of diverse cultures. Therefore, four options are available for meeting the requirement in Subgroup IV-B:

**Option 1: Complete at least three credits of study at an institution of higher education located outside the United States.** Students planning to study abroad must apply through the Office of Study Abroad ([https://www.cmich.edu/office\\_provost/GlobalEngagement/abroad/Pages/default.aspx](https://www.cmich.edu/office_provost/GlobalEngagement/abroad/Pages/default.aspx)).

**OR**

**Option 2: Complete at least three credits of study in a CMU faculty-led course approved through the Office of Study Abroad and taught outside the United States.** To have the course count for credit in Subgroup IV-B, the faculty member leading the course must have approval from the General Education Committee prior to the departure. Information on completing the application can be obtained on the General Education Program website ([https://www.cmich.edu/office\\_provost/CIS/Pages/General%20Education/University-Program.aspx](https://www.cmich.edu/office_provost/CIS/Pages/General%20Education/University-Program.aspx)).

**Pre-Approved Courses:**

ASL 593 - Jamaica Study Abroad 3(Spec)  
 BIS 342 - Intercultural Business Communication Abroad 1-9(Spec)  
 FMD 225 - Fashion in Paris 3(Spec)  
 HDF 320 - HDFs International Service Learning 3-6(Spec)  
 RPL 312 - Disability in Southeast Europe 3(3-0)  
 RPL 369 - Experiential Leadership and Global Learning 3(3-0)

**OR**

**Option 3: Complete three credits of applied coursework (e.g., internship, practicum, service-learning project) outside the United States.** Students must apply through the Office of Study Abroad. After completing the course, students submit an application for credit in Subgroup IV-B *Studies in Global Cultures* that is evaluated by the General Education Committee. Information on completing the application can be obtained on the General Education Program website ([https://www.cmich.edu/office\\_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx](https://www.cmich.edu/office_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx)).

**OR**

**Option 4: Complete at least 3 credits at the 300 level or above from SPN, FRN, or GER, other than courses listed in other University Program subgroups.**

**OR**

**Option 5: Select from the following:**

ANT 175 - Archaeology of the Americas 3(3-0)  
 ANT 240 - Current Native American Issues 3(3-0)  
 ANT 300 - Study Abroad in Anthropology 3-6(Spec)  
 ANT 321 - Cultures of Latin America 3(3-0)

ANT 322 - Cultures of Africa 3(3-0)  
 ANT 324 - Cultures of the South Pacific 3(3-0)  
 ARB 101 - Elementary Arabic I 4(4-0)  
 ARB 102 - Elementary Arabic II 4(4-0)  
 ART 489 - Islamic Art 3(3-0)  
 ASL 391 - American Deaf Culture via Study Abroad in France 3(3-0)  
 BCA 309/COM 309 - Mediated Communication and Global Identity 3(3-0)  
 BLR 170 - Legal Studies in Global Cultures 3(3-0)  
 CGL 201 - Introduction to Global Citizenship Study Abroad 3(3-0)  
 CGL 300 - Study Abroad Experience 1-6(Spec)  
 CHN 101 - Elementary Chinese I 4(4-0)  
 CHN 102 - Elementary Chinese II 4(4-0)  
 CHN 201 - Intermediate Chinese 4(4-0)  
 COM 309/BCA 309 - Mediated Communication and Global Identity 3(3-0)  
 ECO 281 - Economic Development of the Pacific Rim 3(3-0)  
 ENG 262 - European Literatures 3(3-0)  
 ENG 328 - Native American Literature and Film 3(3-0)  
 FRN 101 - Elementary French I 4(4-0)  
 FRN 102 - Elementary French II 4(4-0)  
 FRN 105 - Accelerated Elementary French 4(4-0)  
 FRN 125 - France's Gastronomies 3(3-0)  
 FRN 201 - Intermediate French I 4(4-0)  
 FRN 202 - Intermediate French II 4(4-0)  
 GEO 373 - Latin America 3(3-0)  
 GEL 385 - Introductory Petroleum Geology 3(2-2)  
 GEO 385 - China: Environment and People 3(3-0)  
 GER 101 - Elementary German I: Language and Culture 4(4-0)  
 GER 102 - Elementary German II: Language and Culture 4(4-0)  
 GER 105 - Accelerated Elementary German 4(4-0)  
 GER 201 - Intermediate German I 4(4-0)  
 GER 202 - Intermediate German II 4(4-0)  
 HON 207WI - Honors Studies in Global Cultures: First Year Seminar 3(3-0)  
 HON 309 - Honors Global Citizenship 1-6(Spec)  
 HST 163 - The Latin American Experience 3(3-0)  
 HST 168 - Modern East Asia 3(3-0)  
 HST 176 - The African Experience 3(3-0)  
 HST 236 - Babylon and Beyond: Ancient Civilizations of the Near/Middle East 3(3-0)  
 HST 237 - Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)  
 HST 361/REL 361 - Sinners and Saints of Colonial Latin America 3(3-0)  
 HST 375 - Continuity and Change in Contemporary Africa, 1960s to the Present 3(3-0)  
 HST379/HUM340-Race,ClassandPower:SouthAfricainthe20thCentury 3(3-0)  
 HUM340/HST379-Race,ClassandPower:SouthAfricainthe20thCentury 3(3-0)  
 JPN 101 - Elementary Japanese I 4(4-0)  
 JPN 102 - Elementary Japanese II 4(4-0)  
 JPN 201 - Intermediate Japanese I 4(4-0)  
 JPN 202 - Intermediate Japanese II 4(4-0)  
 JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)  
 LAT 101 - Elementary Latin I 4(4-0)  
 MUS 115 - Music of the Caribbean: Salsa to Reggae 3(3-0)  
 PES 305 - Physical Activity and Wellness within the Nordic Culture 3(3-0)  
 POR 105 - Accelerated Elementary Portuguese 4(4-0)  
 PSC 330 - Study Abroad: Ancient Athens and Modern Greece 3(3-0)  
 PSC 344 - East Asian Political Systems and Processes 3(3-0)  
 PSC 347 - Europe and the European Union 3(3-0)  
 PSC 348 - Latin American Political Systems 3(3-0)  
 PSC 370 - Gurus, Avatars, and Nukes: South Asian Politics 3(3-0)  
 REL 220 - Religious Traditions of China 3(3-0)

(continued)

REL 221 - Religious Traditions of Japan 3(3-0)  
 REL 222 - Religious Traditions of India 3(3-0)  
 REL 314 - Islam 3(3-0)  
 REL 320 - The Buddhist Tradition 3(3-0)  
 REL 361/HST 361 - Sinners and Saints of Colonial Latin America 3(3-0)  
 SPN 101 - Elementary Spanish I 4(4-0)  
 SPN 102 - Elementary Spanish II 4(4-0)  
 SPN 105 - Accelerated Elementary Spanish 4(4-0)  
 SPN 112 - Basic Spanish for the Health Professions 3(3-0)  
 SPN 201 - Intermediate Spanish I 4(4-0)  
 SPN 202 - Intermediate Spanish II 3(3-0)  
 SPN 214 - Intermediate Conversation and Composition 3(3-0)  
 TAI 399 - Theatre and the Holocaust 3(3-0)

These IV-B courses are approved for offering as WI: BIS 342, BLR 170, ENG 262; FRN 201, FRN 202, HON 207WI; HST 163, HST 168, HST 176, HST 236, HST 237, HST 361, HST 375, HST 379; HUM 340; JRN 372; PSC 347; REL 222, REL 361; SPN 201, SPN 202, SPN 214.

#### Subgroup IV-C: Studies in Racism and Cultural Diversity in the United States (3 hours)

Central Michigan University recognizes the potential of for applied experiences to impart an understanding of racism and cultural diversity within the United States.

Therefore, three options are available for meeting the requirement for Subgroup IV-C: *Studies in Racism and Cultural Diversity in the United States*:

**Option 1: Complete at least three credits of study in a CMU faculty-led course that involves interacting with one or more of the major groups that experience both racism and invidious discrimination in the United States.** To have the course count for credit in Subgroup IV-C: *Studies in Racism and Cultural Diversity within the United States*, the faculty member leading the seminar must have approval from the General Education Committee prior to the experience. Information on completing the application can be found on the General Education website ([https://www.cmich.edu/office\\_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx](https://www.cmich.edu/office_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx)).

OR

**Option 2: Complete three credits of applied coursework (e.g., internship, practicum, service-learning project) with one or more of the major groups that experience both racism and invidious discrimination in the United States.** Students must sign up with a faculty member who oversees the experience and, after completing the course, submit the proposal for credit in Subgroup IV-C: *Studies in Racism and Cultural Diversity within the United States* for evaluation by the General Education Committee.

Information on completing the application can be found on the General Education Program website ([https://www.cmich.edu/office\\_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx](https://www.cmich.edu/office_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx)).

OR

**Option 3: Select from the following:**

ANT 320 - Native North American Cultures 3(3-0)  
 BLR 222 - The Search for Racial Justice through Law 3(3-0)  
 BLR 365 - Native American Justice Through Law 3(3-0)  
 CGL 145/IGR 145 - Racism and Discrimination in America through Dialogue 3(3-0)  
 CGL 350 - Latino Culture in the U.S. 3(3-0)  
 ENG 146WI - Race and Racism in American Literature 3(3-0)  
 ENG 329 - African American Literature 3(3-0)  
 ENG 382 - Racism and Diversity in Children's and Young Adult Literature 3(3-0)  
 HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)  
 HDF 205 - Teaching and Learning about Race in Early Childhood 3(3-0)  
 HED 216 - Race in Higher Education 3(3-0)  
 HON 208WI - Honors Studies in Racism and Diversity in the U.S.: First Year Seminar 3(3-0)

HON 319 - Culture and Inequality in the U.S. 3(Spec)  
 HST 215 - The American Civil War: A House Divided 3(3-0)  
 HST 222WI - Cherokees, Slaves and the Struggle for Racial Justice 3(3-0)  
 HST 323 - History of Native Americans 3(3-0)  
 HST 324 - "Death is Better than Slavery": African American History to 1877 3(3-0)  
 HST 325 - "By Any Means Necessary": African American History, 1877-Present 3(3-0)  
 IGR 145/CGL 145 - Racism and Discrimination in America through Dialogue 3(3-0)  
 JRN 380 - Racial and Cultural Diversity: Mass Media's Role 3(3-0)  
 MUS 319 - Racism and Discrimination in Jazz History 3(3-0)  
 PHL 345/PSC 325/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)  
 PSC 125 - African American Politics 3(3-0)  
 PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)  
 REL 140 - Religion, Race and Discrimination in America 3(3-0)  
 REL 240 - African-American Religion 3(3-0)  
 REL 345/PHL 345/PSC 325/SOC 345 - The Civil Rights Movement 3(3-0)  
 SOC 323 - Racism and Inequality 3(3-0)  
 SOC 345/PHL 345/PSC 325/REL 345 - The Civil Rights Movement 3(3-0)  
 SPN 390 - Chicano/Latino Experience in the US 3(3-0)

These IV-C courses are approved for offering as WI: BLR 222, BLR 365, ENG 146WI, HDF 205, HON 208WI; HST 215, 222WI, 323, 324, 325; JRN 380; MUS 319; REL 140, 240.

## E. Additional Guidelines for the University Program

1. International students enrolled in an undergraduate degree program meet the University Program Subgroup IV-B Studies in Global Cultures requirement after successfully completing at least one semester of full-time study at Central Michigan University.
2. No more than two courses or seven hours of University Program credit may be taken as CR/NC.
3. Unless a degree or major specifically prohibits it, courses required for a specific major, minor, or other degree may also be used to satisfy University Program requirements, provided that the courses are also on the list of approved University Program courses.
4. CLEP General Examination credit, credit from a Prior Learning Assessment, or retroactive credit may not be used to satisfy any University Program requirements.
5. Students may only repeat a designator once in fulfilling their University Program requirements.

For more information, consult the General Education website at [https://www.cmich.edu/office\\_provost/AcademicAffairs/gened](https://www.cmich.edu/office_provost/AcademicAffairs/gened)



## IV. General Education Program Requirements for Students with Transfer Credit

### A. Transfer Students with MACRAO/MTA Agreement, Out-of-State Statewide Equivalency Agreements, and Associate Degrees

Students will have satisfied the University Program portion of the General Education requirements at CMU, as well as the requirement for completing six credits of Writing Intensive coursework within the University Program, if they present a transcript from an accredited institution within the United States documented as having (one of these):

1. satisfied the State of Michigan MACRAO or MTA Agreement.
2. satisfied a statewide transfer agreement.
3. completed an Associate of Arts or Associate of Science.
4. completed an Associate Degree in an applied or professional discipline. Disciplines must be germane to a program at Central Michigan University. (*Academic Senate, 3/24/20*)

### B. University Program Transfer Block Option

Students not satisfying the MACRAO or MTA Agreement may satisfy the requirements for the University Program, as well as the requirement for completing six credits of Writing Intensive coursework within the University Program under this option. Students would be eligible to complete the UP through the Transfer Block option if they have completed 15 or more hours as designated below and have 12 or fewer hours remaining.

#### 1. Group I - Humanities

A minimum of six credit hours of coursework from at least two of the following disciplines: ENG (English, not including composition courses); ART (Art); BCA (Broadcasting); HST (History); MUS (Music); PHL (Philosophy); REL (Religion); TAI (Drama); HUM (General Humanities).

#### 2. Group II - Natural Sciences

A minimum of six credit hours of coursework from at least two of the following disciplines: ANT (Anthropology [physical only]); AST (Astronomy); BIO (Biology); CHM (Chemistry); ESC (Earth Science); ENS (Environmental Science); GEL (Geology); GEO (Geography [physical and GIS only]); HSC (Health Promotion and Rehabilitation); MET (Meteorology); MTH (Mathematics); NDS 370; PHY (Physics); PHS (Physical Sciences); SCI (General or Natural Science); STA (Statistics). One course must include a laboratory section.

#### 3. Group III - Social Sciences

A minimum of six credit hours of coursework from at least two of the following disciplines: ANT (Anthropology); CSD (Communication Sciences & Disorders); Human Environmental Studies; FMD (Fashion Merchandising & Design); GEO (Geography [not physical or GIS]); IND (Interior Design); HDF (Human Development & Family Studies); NDS (Nutrition and Dietetics); PSC (Political Science); PSY (Psychology); SOC (Sociology); ECO (Economics); GEO (Geography); JRN (Journalism); SSC (Social Science).

#### 4. Group IV - Studies in Discrimination, Culture and Diversity

Three (3) credit hours of a specific course that applies to Subgroup IV-A *Studies in Discrimination*, 3 credit hours of a specific course that applies to Subgroup IV-B: *Studies in Cultures Outside of the Anglo-American Tradition*, and 3 credit hours of a specific course that applies to Subgroup IV-C: *Studies in Racism and Diversity in the United States*.

### C. Additional Guidelines for Students with Transfer Credit

1. Students who have no more than 12 credit hours remaining on the University Program Transfer Block Option with completed coursework as distributed above (and prior to their first full-time enrollment at CMU) may use the University Program Transfer Block Option. For purposes of this rule, "full-time" means at least 12 credit hours attempted in a single semester. Any additional courses needed to meet the distribution requirements outlined above and to reach a total of 27 credit hours must be chosen from the appropriate categories within the list of approved University Program courses. For example, any deficiency in transfer credit for Group I – *Humanities* must be remedied by completing a University Program course listed under Subgroup I-A: *Human Events and Ideas* or Subgroup I-B: *The Arts*. Any deficiency in transfer credit for Group II – *Natural Sciences* must be remedied by taking a course listed under Subgroup II-A: *Descriptive Sciences* or Subgroup II-B: *Quantitative and Mathematical Sciences*. In choosing University Program courses to complete 27 credit hours, students must also follow the rules that govern selection of more than one course with the same designator.
2. Students not eligible to follow the Transfer Block option as described above will be required to complete the entire University Program. Comparable coursework at another college or university may be transferred into the University Program on a course-by-course basis when it transfers as equivalent to a CMU course approved as a University Program course or has content deemed congruent with the goals of the University Program and courses approved on the University Program.
3. Competency requirements apply to all students regardless of transfer status, including completion of some competencies before 56 credit hours, except in the case when a student transfers in six WI credits. Transfer students who enter the University with 44 or more credit hours must complete competencies by the end of the second semester at CMU. Transfer students verified as completing the MACRAO or MTA or qualified for the Transfer Block will be exempt from six (6) WI semester hours of the required total of twelve (12) semester hours. Transfer students with the MACRAO or MTA or Transfer Block are required to complete six (6) semester hours of WI designated credits at CMU. WI transfer credit will not automatically be given for WI courses taken at other institutions regardless of whether the institution has similar designations or requirements. You must read carefully the section titled *The Competencies* at the beginning of the General Education section.
4. Transfer students who have no comparable coursework at another college or university are required to meet the General Education Program requirements in the preceding sections.



## » Majors and Minors

A major is the field of study in which you specialize while earning your university degree. Often degree requirements include an appropriate minor study area to complement the major. Through its departments, CMU provides majors and minors in a wide variety of academic and professional disciplines. Interdepartmental and interdisciplinary majors and minors are also offered.

Requirements for majors and minors are listed in the individual departmental, interdepartmental, and interdisciplinary sections of this Bulletin. A major consists of at least 30 semester hours; a minor, at least 20 semester hours. The courses must be chosen subject to the approval of your advisor for that major or minor. Degree requirements detail which majors and minors are permitted on each degree. Central Michigan University credits included in majors and minors used to meet graduation requirements must average 2.0 or better. You should note, however, that some majors and minors have higher grade point requirements. Be sure to check the Admissions, Retention and Termination Standards for your major and/or minor.

Students need to officially declare their major by the time they earn 56 hours. When deciding on a major, you should contact the departmental office of that major to be assigned an advisor. (Example: history majors should contact the Department of History, World Languages, and Cultures.) If you are majoring in an interdisciplinary or interdepartmental area or special program, contact any of the departments represented in the major. Your advisor will be authorized to officially declare your major electronically and add it to your student record. To be assigned a minor advisor and to officially declare a minor, you will follow the same procedures.

*\*A concentration is a distinct and specialized program of study within a student's major. A minimum of twelve hours is required for an undergraduate concentration. All university-approved concentrations will be listed on the student's transcript.*

### Policies Concerning Majors and Minors

The following policies concerning majors and minors may apply to your degree work at CMU.

**B.S. in Ed.** If you are following either the Elementary or Secondary Certificate under the Bachelor of Science in Education degree, the major and minor presented for certification must be in different subjects.

**Non-Teaching.** Under a non-teaching degree the minor may not have the same name as the major.

**Courses fulfilling more than one requirement.** Hours that are counted toward departmental majors and minors may also be counted as partial fulfillment of other departmental, interdisciplinary and/or interdepartmental major or minor requirements, provided that: a.) the student offers the required number of semester hours for graduation, and b.) no course is counted toward both a major and a minor with the same name.

**Undergraduate Certificates.** Students may not receive an Undergraduate Certificate with the same name as their major, minor, concentration or option **OR** due to the fact that the subset of courses is already on a student's major, minor, concentration, or option.

**Degree, major or minor from another Bulletin.** Most students will complete requirements for graduation following the Bulletin in effect at the time of their initial registration. A Bulletin published after initial registration may be chosen by the student when it is to the student's advantage. However, no student may graduate under the requirements of a Bulletin published more than seven calendar years prior to the date of the student's graduation. Students following a program that leads to teacher certification have different limitations and should consult the section in this Bulletin titled *Standards Leading to Teacher Certification*. An undergraduate student completing graduation and degree requirements on a degree program appearing in any CMU Bulletin may elect either majors or minors on that same degree in a subsequent CMU Bulletin. This option is available when declared with an appropriate departmental advisor at the time a major or minor is declared.

**Additional major or minor.** In addition to satisfying major and minor requirements, you may declare an additional major or minor listed in the Bulletin even if it is not listed as acceptable for your chosen degree. Upon completion of your degree and graduation requirements the additional major or minor, if successfully completed, will be recorded. See the *Additional Majors and Minors Policy* in the Index.

**Undergraduate Subtitled Courses.** Credit earned in undergraduate courses titled Studies, Topics, Issues, or Workshops (including Special, Advanced, or Selected) may not constitute more than 50 percent of an undergraduate major or minor. Graduate and undergraduate courses that are subject to limitation under the policy on unspecified content or variable credit are listed in each department.

### Majors and Minors Chart

The following chart identifies available majors and minors at CMU and lists the degree program(s) to which the majors may be applied. The chart indicates teaching and non-teaching majors and minors based on the degree earned; e.g., if you want to teach, teaching certification is usually pursued on the B.S. in Ed. degree. There are, however, several degrees (B.A., B.S., or B.A.A.) that allow you to earn teaching certification for those majors and minors that indicate certification is available. Consult your departmental advisor.

Sometimes majors or minors are not listed under the titles for which you are searching. For example, there is a Physical Education major for students who want teaching certification and a Sport Management major for those who want physical education studies without teaching certification. Students of speech-language pathology need to look under communication sciences and disorders. Students pursuing studies in hotel and restaurant management want the Hospitality Services Administration major. The music department offers a variety of specialties, but each is studied under the Music major. If you can't find a particular major or minor on this chart by name, use the index in this bulletin to see if there is a department that offers a program in which you are interested.

To find the degree and graduation requirements for any specific major or minor listed below, consult the department sections. Direct your questions concerning any major or minor to the appropriate department.

**Major or Minor**

(\*offers concentrations)

**Major**

(and applicable degrees)

**Minor**

May not be available on all degrees.  
Please check degree pages to find  
where minor is applicable and  
discuss your choice with your  
major advisor.

Accounting	Yes (BSBA)	Yes
Actuarial and Risk Analytics	No	Yes
Actuarial Science	Yes (BA; BS)	No
Administration*	Yes (BAA; BS)	No
Advertising	Yes (BA; BS)	Yes
American Sign Language	No	Yes
Anthropology	Yes (BA; BS)	Yes
Applied Business Communication	No	Yes
Art *	Yes (BAA; BFA)	Yes
Art History	Yes (BA)	Yes
Astronomy and Astrophysics	Yes (BA, BS)	No
Athletic Coaching	No	Yes
Athletic Training (3+2 BSAT/MSAT program)	Yes (3+2 BSAT/MSAT)	No
Biochemistry	Yes (BA; BS)	No
Biological Analytics	No	Yes
Biology*	Yes (BA, BS)	Yes
Broadcast & Cinematic Arts	Yes (BA; BAA; BS)	Yes
Business Administration	(See General Business or International Business)	Yes
Chemistry*	Yes (BA; BS)	Yes
Child Development	Yes (BA; BAA; BS)	Yes
Cinema Arts	Yes (BFA)	No
Cinema Studies	No	Yes
Commercial Music	Yes (BAA)	No
Communication	Yes (BA; BAA; BS)	Yes
Communication Sciences and Disorders	Yes (BAA; BS)	Yes
Community Development*	Yes (B.S. w/ Opt. in Comm. Dev.)	No
Computational Mathematics and Analytics	No	Yes
Computer Engineering	Yes (BSCmpE)	No
Computer Science	Yes (BS)	Yes
Creative Writing	No (See also English Literatures, Language, and Writing Major)	Yes
Cybersecurity	Yes (BS)	No
Dance	No	Yes
Dance Studies	Yes (BAA)	No
Data Engineering	No	Yes
Data Science	Yes	No
Dietetics	Yes (BA; BS)	No
Disability Studies and Community Inclusion	No	Yes
Early Childhood Development and Learning	Yes (BA; BAA; BS)	Yes
Earth Science	No	Yes
Economics	Yes (BA; BS; BSBA)	Yes
Electrical Engineering	Yes (BSEE)	No
English Literatures, Language, and Writing	Yes (BA, BS)	No
Entrepreneurship	Yes (BAA)	Yes
Environmental Analytics	No	Yes
Environmental Engineering	Yes (BSEnvE)	No
Environmental Health and Safety	Yes (BA, BS)	No
Environmental Science	Yes (BS)	Yes
Environmental Studies	Yes (BA; BS)	No
Ethics, Values, and Society	No	Yes
Event and Recreation Management	Yes (BAA)	No
Event Management	No	Yes
Exercise Science	Yes (BA, BAA, BS)	No
Family Studies	Yes (BA; BAA; BS)	Yes
Fashion Merchandising and Design*	Yes (BA; BAA; BS)	No
Fashion Design	No	Yes
Finance	Yes (BSBA)	Yes
French	Yes (BA; BS)	Yes
Game Design Thinking	No	Yes
General Business Administration: ABC Conc.	Yes (BSBA)	No
General Management	Yes (BSBA)	No
Geographic Information Sciences	No	Yes
Geography *	Yes (BA; BS)	Yes

(continued)

**Major or Minor**

(\*offers concentrations)

**Major**

(and applicable degrees)

**Minor**

May not be available on all degrees.  
Please check degree pages to find  
where minor is applicable and  
discuss your choice with your  
major advisor.

Geology	Yes (BA; BS)	Yes
Geospatial Analytics	No	Yes
German	Yes (BA; BS)	Yes
Health Administration	Yes (BAA; BS)	No
Health and Physical Education	Yes (BSEd: Secondary)	No
Health Fitness and Performance	No	Yes
History	Yes (BA; BS; BSEd: Secondary)	Yes
Hospitality Services Administration*	Yes (BSBA)	Yes
Human Resource Management	Yes (BSBA)	No
Individualized Studies	Yes (BIS)	No
Industrial Engineering Technology	Yes	No
Industrial Technology	No	Yes
Information Systems	Yes (BSBA)	Yes
Information Technology	Yes (BA; BS)	Yes
Integrated Science	Yes (BSEd: Secondary)	No
Integrative Public Relations	Yes (BA; BAA; BS)	No
Intergroup Relations and Justice	No	Yes
Interior Design	Yes (BA; BAA; BS)	Yes
International Business	Yes (BSBA)	No
International Relations	Yes (BA, BS)	No
Journalism* ( <i>see also Photojournalism</i> )	Yes (BA; BS)	Yes
Law and Economics	Yes (BA; BS; BSBA)	No
Leadership	No	Yes
Legal Studies	No	Yes
Logistics Management	Yes (BSBA)	No
Management	( <i>See General Mgt. or Human Resource Mgt.</i> )	Yes
Marketing *	Yes (BSBA)	Yes
Mathematics*	Yes (BA; BS) ( <i>See also Teaching Mathematics</i> )	Yes
Mechanical Engineering	Yes (BSME)	No
Mechanical Engineering Technology	Yes (BSET)	No
Meteorology	Yes (BS)	No
Military Science	No	Yes
Multimedia Design	No	Yes
Museum Studies	No	Yes
Music * ( <i>See also Commercial Music</i> )	Yes (BA; BS; BMus; BMusEd)	Yes
Music Theatre	Yes (BFA)	No
Neuroscience*	Yes (BS)	No
Nonprofit Leadership and Service	No	Yes
Nursing	Yes (BSN)	No
Nutrition	No	Yes
Organizational Leadership	Yes (B.A.A., B.S.)	No
Outdoor and Environmental Education	No	Yes
Outdoor and Environmental Recreation	Yes (BA, BAA, BS)	No
Personal Financial Planning	Yes (BSBA)	No
Philosophy	Yes (BA; BS)	Yes
Photojournalism	Yes (BA; BS)	No
Physical Activity Specialist	Yes (BA; BS; BAA)	No
Physical Education	<i>See Health and Physical Education</i>	No
Physics	Yes (BA; BS)	Yes
Political Science	Yes (BA; BS)	Yes
Product Design Engineering Technology	Yes (BSET)	No
Professional Sales	No	Yes
Psychology *	Yes (BA; BS)	Yes
Public and Nonprofit Administration	Yes	No
Public Health *	Yes (BA, BAA, BS)	Yes
Public History	Yes (BA, BS)	No
Public Law	No	Yes
Purchasing & Supply Management	Yes (BSBA)	No
Real Estate: Development and Finance	Yes (BSBA)	Yes
Recreation	No	Yes
Recreational Therapy and Rehabilitation	Yes (BA, BAA, BS)	No
Religion	Yes (BA; BS)	Yes

**Major or Minor**

(\*offers concentrations)

**Major**

(and applicable degrees)

**Minor**

May not be available on all degrees. Please check degree pages to find where minor is applicable and discuss your choice with your major advisor.

Science ( <i>see also Integrated Science</i> )	No	Yes
Social and Criminal Justice	No ( <i>see also Sociology Majors</i> )	Yes
Social Science	Yes (BA; BS)	No
Social Studies*	Yes (BSEd: Secondary)	No
Social Work	Yes (BSW)	No
Sociology *	Yes (BA; BS)	Yes
Songwriting	No	Yes
Spanish	Yes (BA; BS)	Yes
Special Education:		
Teachers of Students w/ Emotional Impairment	Yes (BSEd: ECE or Secondary)	No
Special Education:		
Teachers of Students w/ Cognitive Impairment	Yes (BSEd: ECE or Secondary)	No
Sport Management	Yes (BA; BAA; BS)	Yes
Statistics	Yes (BA; BS)	Yes
Substance Use Disorders	No	Yes
Sustainability and Environmental Policy	No	Yes
Teaching Early Childhood B-K and Early Childhood Spec. Ed.	Yes (BSED ECE)	No
Teaching Early Childhood B-3 and Early Childhood Spec. Ed.	Yes (BSED ECE)	No
Teaching English Language Arts Grades 5-12	Yes (BSEd: Secondary)	No
Teaching English Language Arts Grades 7-12	No	No
Teaching English Language Arts Grades 5-9	No	Yes
Teaching English Learners	No	Yes
Teaching Grades 3-6	Yes (BSED ECE)	
Teaching Grades 3-6 with Special Education	Yes (BSED ECE)	
Teaching Grades PK-3	Yes (BSED ECE)	No
Teaching Grades PK-3 with Special Education	Yes (BSED ECE)	
Teaching Grades PK-6	Yes (BSED ECE)	No
Teaching Mathematics Grades 5-12	Yes (BSEd: Secondary)	No
Teaching Mathematics Grades 5-9	No	Yes
Teaching Mathematics Grades 7-12	No	Yes
Theatre & Interpretation*	Yes (BA; BAA; BS; BFA)	Yes
Visual Merchandising	No	Yes
Women and Gender Studies	No	Yes
Youth Studies	No	Yes

## Requirements for Undergraduate Certificates

Certificate programs are designed to be completed quickly, usually in less than one year, and are independent of all general education and degree requirements. Certificates are awarded at all levels from undergraduate through continuing education and signify that a student has knowledge, skills, or competencies in an area of specialization.

- Undergraduate certificates are 9 to 18 credit hours.
- Non-degree seeking students must meet the existing admission standards to the University for Non-degree Special Admission for on-campus enrollment or Special Admission for off-campus enrollment. The student must consult with an advisor and sign a Certificate Program Authorization form (on campus) or a Program Plan (off-campus). Degree-seeking students must meet the undergraduate admission requirements.
- Certificates must not include hidden prerequisites and/or co-requisites.
- All courses on the certificate must be letter graded with the exception of those courses exclusively offered as credit/no credit.
- The minimum cumulative GPA based on all graded coursework for the certificate must be established by the 'proposing entity' but can be no lower than a 2.0. Courses may be repeated according to the existing rules for degree programs.
- Certificates are recorded on students' transcripts when all courses are completed.
- Certificates may be housed in one department or they may be interdisciplinary, in which case the responsible Interdisciplinary Council must be identified.

Certificates are noted on the transcript when all courses have been completed and students will receive an official CMU Certificate signed by the President and Chair of the Board of Trustees. Certificates are offered to both degree-seeking and non-degree students. For degree-seeking students, recognition of their certificate occurs at the same commencement ceremony as their degree. Students earning a stand-alone certificate are eligible to attend the commencement ceremony immediately after the certificate courses have been completed. (*Academic Senate, 3/2/21, 9/27/22*)



# » Interdisciplinary and Interdepartmental Studies

**Discover how to become a future leader and innovator through interdisciplinary studies.**

*Interdisciplinary programs draw from two or more academic disciplines that work together to create a powerful learning experience emphasizing integrative learning, critical thinking, essential questioning and creative problem solving.*

## **Benefits of Interdisciplinary study:**

- Discover the value of integrating the study of various academic disciplines suited to your life-long learning interests.
- Embrace new ideas that you couldn't imagine while studying just one subject in isolation from others.
- Become an interdisciplinary thinker who analytically and creatively embraces new and futuristic ideas.
- Develop collaboration skills while working with others who have different perspectives on problems than yours.
- Prepare for graduate and professional study, and for careers in new and emerging fields.

*This section lists programs that are interdisciplinary. The majority of majors and minors are described within their appropriate departments.*

## **Administration Major**

*B.A.A. degree or B.S. degree*

The Major in Administration consists of a 27 semester hour academic core and a concentration of 12 semester hours.

### **ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

College of Business Administration: No more than 27 semester hours may be taken from the College of Business Administration. These hours include both business transfer credits and credits earned at Central Michigan University.

### **Core Courses (27 hours)**

ACC 203 - Essentials of Accounting for Business 3(3-0)  
 ECO 201 - Principles of Macroeconomics 3(3-0)  
 ECO 202 - Principles of Microeconomics 3(3-0)  
 FIN 303 - Financial Administration 3(3-0)  
 MGT 312 - Introduction to Management 3(3-0)  
 MGT 495 - Global Management Strategy 3(3-0)  
 MKT 300 - Introduction to Marketing 3(3-0)  
 MSA 522 - Digital Leadership 3(3-0)  
 STA 282QR - Introduction to Statistics 3(3-0)

### **Concentrations**

Select from the following concentrations:

### **Ergonomics Administration Concentration**

#### **Concentration Courses (12 hours)**

Select hours from the following:

BUS 501 - Project Management Fundamentals 3(3-0)  
 BUS 503QR - Applied Lean Six Sigma 3(3-0)  
 IET 501 - Application of Industrial Management Principles 3(3-0)  
 IET 502 - Computer Applications in Industry 3(3-0)  
 IET 524 - Technology and Environment 3(3-0)  
 MGT 340 - Production/Operations Management 3(3-0)

### **Personnel Administration Concentration**

#### **Concentration Courses (12 hours)**

Select 12 hours from the following:

BLR 202 - Legal Environment of Business 3(3-0)  
 COM 461 - Communication in Leadership 3(3-0)  
 JRN 350 - Public Relations Principles and Practices 3(3-0)  
 MGT 320 - Human Resource Management 3(3-0)  
 MSA 502 - Professional Development in Organizations 3(3-0)  
 MSA 506 - Evaluation, Coaching and Mentoring 3(3-0)  
 PSY 336 - Industrial/Organizational Psychology 3(3-0)

**Total: 39 semester hours**

### **Option in Community Development**

*B.S. degree with Option in Community Development*

No more than a total of 27 hours of credit may be taken from the College of Business Administration. These credits include both business transfer credit and credits earned at Central Michigan University.

### **Concentration in Community Services**

No more than a total of 27 hours of credit may be taken from the College of Business Administration. These credits include both business transfer credit and credits earned at Central Michigan University.

#### **Representative Courses (12 hours)**

Select hours from the following list:

HDF/WGS 213 - Introduction to Human Sexuality 3(3-0)  
 HSC 317 - Community Health 3(3-0)  
 SOC 323 - Racism and Inequality 3(3-0)  
 SOC 324 - Criminology 3(3-0)  
 SOC 411 - The Family 3(3-0)  
 SWK 470 - Social Work Practicum I 4(Spec)

**Total: 12 semester hours**

### **Concentration in Health Sciences**

#### **Required Course**

HSC 211 - Human Anatomy and Physiology 3(3-0)

**Note:** HSC 211 (or equivalent) is required. It will not count toward the 12 hours in Health Sciences but it may be applied toward the General Education Requirements. It is a prerequisite to some of the courses listed below.

#### **Representative Courses (12 hours)**

Select 12 credit hours from the following list (at least 6 hours must be at the 300 level or above):

HSC 106QR - Healthy Lifestyles 3(3-0)  
 HSC 205 - Responding to Emergencies 2(1-2)  
 HSC 235 - Psychoactive Drugs 3(3-0)  
 HSC 317 - Community Health 3(3-0)  
 HSC 352 - Environmental Health 3(3-0)  
 HSC 390 - Health and Aging 3(3-0)  
 HSC 411 - Pathophysiology 3(3-0)  
 HSC 510 - Independent Reading Experience 1-4(Spec)  
 HSC 512 - Special Topics in Health Education 1-12(Spec)  
 HSC 519 - Death Education and Suicide Prevention 3(3-0)  
 HSC 522 - Consumer Health Education 2(2-0)  
 HSC 523 - AIDS Education 1(1-0)  
 HSC 525 - Sexually Transmitted Disease Workshop 1(Spec)  
 HSC 526 - Behavioral Health 3(3-0)  
 HSC 527 - Sex Education Workshop 1(Spec)  
 HSC 528 - Smoking and Health Education Workshop 1(Spec)

HSC 529 - Alcohol Education Workshop 1(1-0)  
 HSC 530 - Drug Abuse Workshop 1(Spec)  
 HSC 534 - Workshop in Principles of Cardiovascular Health and Disease 1(Spec)  
 HSC 537 - Stress Reduction Workshop 1(Spec)  
 HSC 547 - Health Risk Identification and Management 3(3-0)  
 NDS 370 - Nutrition 3(3-0)

**Total: 12 semester hours**

### Concentration in Public Administration

#### Representative Courses (12 hours)

Select hours from the following list:

ECO 201 - Principles of Macroeconomics 3(3-0)  
 ECO 202 - Principles of Microeconomics 3(3-0)  
 ECO 360 - Public Economics 3(3-0)  
 ECO 503 - Seminar in Urban Economics 3(3-0)  
 GEO 340 - Urban Geography 3(3-0)  
 JRN 350 - Public Relations Principles and Practices 3(3-0)  
 MGT 312 - Introduction to Management 3(3-0)  
 MGT 320 - Human Resource Management 3(3-0)  
 MGT 348 - Dynamics of Organizational Behavior 3(3-0)  
 MGT 355 - Communications: Managerial Applications 3(3-0)  
 MGT 445 - Compensation Administration 3(3-0)  
 PAD 210 - Introduction to Public Administration 3(3-0)  
 PAD 313 - Public Budgeting Processes 3(3-0)  
 PAD 411 - Public Sector Human Resources 3(3-0)  
 PSC 100 - Introduction to Political Science 3(3-0)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)  
 PSC 125 - African-American Politics 3(3-0)  
 PSC 261 - State and Local Government 3(3-0)  
 PSC 320 - The American Legislative Process 3(3-0)  
 PSC 322 - Judicial Process and Politics 3(3-0)  
 PSC 326/WGS 326 - Women and Politics 3(3-0)  
 PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

**Total: 12 semester hours**

## Earth Science Minor

*B.S. in Ed. degree, Secondary Standard Certificate*

This minor offers a balanced interdisciplinary program of course-work in the earth and space sciences for students planning to teach middle and high school earth science. The required courses have been selected to prepare students to teach the earth and space science content in the Michigan Curriculum Framework including strong preparation in science inquiry through laboratory and field methods experiences. Students are encouraged to work closely with an advisor throughout their program. Courses, where appropriate, may be double counted with the University Program and the degree requirements on the Bachelor of Science in Education.

#### ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS

All courses must be taken for a grade, not for credit/no credit even if offered as an option. Grades in courses transferred to CMU will count in the calculation of the major GPA. A minimum 2.7 GPA (B-) must be earned in all teaching majors.

In addition to the courses listed below, each student must receive training in safe chemical use and storage and the care of living things from trained personnel prior to applying for student teaching. Students should check the Integrated Science website for the training workshop schedule. There is no enrollment charge to the students for the training and no credit hours earned. The training is generally offered once during the Fall semester and twice during the Spring semester. The Interdisciplinary Science Education Council oversees these training workshops.

This minor is administered by the Interdisciplinary Science Education Council. Students are cautioned that they must have 24 semester hours on their Earth Science minor that are not counted on any other major or minor for teaching certification.

#### Required Courses I (16 hours)

AST 111 - Astronomy 3(3-0)  
 GEL 201 - Earth History 3(2-2)  
 GEL 320 - Earth Materials and Resources 3(2-3)  
 GEO 201 - Weather and Climate 3(2-2)  
 GEO/GEL 205 - Oceanography 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

ESC 400 - Earth Science Education 3(2-2)  
 SCI 400 - Teaching Integrated Science in Secondary School 3(2-2)

#### Required Courses III (3 hours)

Select one of the following:

GEL 100 - Introduction to Earth Systems 3(2-2)  
 GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)

#### Required Courses IV (3 hours)

Select one of the following:

GEO 330 - Natural Resource Conflicts and Sustainable Development 3(3-0)

#### Required Courses V (3 hours)

Select one of the following:

GEL 413 - Geomorphology 3(2-2)  
 GEO 210 - Landforms 3(2-2)

**Total: 28 semester hours**

## Environmental Health & Safety Major

*B.A. degree or B.S. degree*

An Environmental Health and Safety (EH&S) Specialist is a professional who protects human health and the environment by overseeing compliance with local, state, and federal environmental health and safety regulations. This interdisciplinary program prepares students for a variety of careers in areas related to Environmental Public Health, Environmental Protection, and Occupational Health and Safety. Responsibilities of an EH&S Specialist include: developing written programs and training to comply with regulations; conducting inspections to ensure compliance with regulations; collecting and analyzing air, water, or soil samples for environmental hazards; and investigating EH&S concerns. The EH&S major is accredited by the National Environmental Health Science and Protection Accreditation Council (EHAC). Only students enrolled in accredited programs are eligible for National Environmental Health Association and federal EH&S scholarships and internships. Graduating from an accredited program ensures the specific standards needed to become a Registered Environmental Health Specialist (REHS) and is essential for employment in federal agencies including the U.S. Public Health Service. Interested students should meet with the Environmental Health and Safety Program Director, Dr. Rebecca Uzarski, as early as possible to assist with course scheduling and discuss career opportunities.

#### ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS

All Environmental Health & Safety majors must:

1. Complete an Environmental Health & Safety internship (180 hrs),
2. Earn a minimum cumulative grade point average of 2.7.

#### Required Courses I (44 hours)

BIO 101 - General Biology 3(2-2)  
 BIO 208 - Microbiology 4(3-3)  
 BIO 365 - Environmental Contaminants 3(3-0)  
 BIO 435 - Environmental Toxicology 3(3-0)  
 CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 CHM 342 - Survey of Organic Chemistry 4(3-3)  
 ENV 101 - Introduction to Environmental Studies 3(3-0)  
 ENV 310 - Environmental Issues Management 3(3-0)  
 HSC 352 - Environmental Health 3(3-0)  
 HSC 404 - Epidemiology 3(3-0)  
 PHY 130QR - College Physics I 4(4-0)  
 STA 282QR - Introduction to Statistics 3(3-0)

(continued)

**Required Courses II (4 hours)**

Select one of the following in consultation with an advisor as it relates to the Technical area:

MTH 130 - Pre-Calculus Mathematics 4(4-0)

MTH 132 - Calculus I 4(4-0)

**Required Courses III (3 hours)**

HNS 452 - Environmental Health & Safety Internship 3(Spec)

**Electives I (0-6 hours)**

Select one of the following in consultation with an advisor as it relates to the Technical area:

GEL 100 - Introduction to Earth Systems 3(2-2)

HSC 211 - Human Anatomy and Physiology 3(3-0)

**Electives II (12 hours)**

To complete training in four technical areas, select a minimum of 12 hours in consultation with an advisor:

BIO 334/GEO 334 - Soil Science 3(2-2)

EGR 201 - Introduction to Environmental Engineering 3(3-0)

GEL 308 - Water Resources and Hydrologic Processes 3(3-0)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)

HNS 345 - Occupational Health and Safety 3(3-0)

HNS 425 - Hazardous Materials Technology 3(3-0)

HSC 317 - Community Health 3(3-0)

HSC 505 - Work Injury Prevention 3(3-0)

NDS 364 - Food Safety, Sanitation, and Health 3(3-0)

**Total: 63-69 semester hours**

**Game Design Thinking Minor**

*B.A., B.A.A., or B.S. degree*

The Game Design Thinking Minor offers students an interdisciplinary approach to the study of games and game design. Drawing upon several disciplinary approaches from across the university, it is structured to allow students to explore and apply the principles of good game design to a broad range of potential career options.

This is an interdisciplinary minor. Contact the Center for Learning through Games and Simulations (College of Liberal Arts and Social Sciences) for more information or to declare the minor.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

No more than 12 total hours may be counted from any one specific field tied to the minor. The other 12 credits must be counted from a selection of at least three other fields.

**Required Courses I (9 hours)**

ART 207 - Introduction to Animation: Traditional Media 3(0-6)

ENG 294WI - Introduction to Creative Writing 3(3-0)

HST 160/ENG 160 - History of Game Design 3(3-0)

**Required Courses II (9 hours)**

Select three of the following:

CPS 282 - Introduction to Multimedia Design 3(3-0)

CPS 382 - Advanced Multimedia Design 3(3-0)

ENG 303WI - Technical Writing 3(3-0)

HST 260 - Games, History, and Conflict 3(3-0)

PHY 212QR/MTH 212QR/STA 212QR - Games, Science, and Probability 3(2-2)

**Required Courses III (3 hours)**

Select one of the following:

ART 308 - Storyboarding for Digital Media 3-6(Spec)

CPS 480 - Introduction to Artificial Intelligence 3(3-0)

ENG 325 - Stories, Spells, and Songs: Folklore and Folklife 3(3-0)

ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)

ENG 503 - Document Design 3(3-0)

HST 120 - Unlikely Princesses: Women of World History 3(3-0)

PES 373 - Esport in Society 3(3-0)

**Required Capstone (3 hours)**

Select one of the following:

HST 560 - Mind Games 3(3-0)

ITC 383 - Computer Game Design 3(3-0)

**Total: 24 semester hours**

**Integrated Science Major**

*B.S. in Ed., Secondary Standard Certificate*

This major offers a balanced, interdisciplinary program of coursework in the life, physical, and earth and space sciences for students planning to teach secondary school science. The required courses have been selected to prepare students to teach the science content in the state science teaching standards, including strong preparation in science inquiry through laboratory and field methods experiences. Students are encouraged to work closely with an advisor throughout their program. Courses, where appropriate, may be double counted with the University Program and the degree requirements on the Bachelor of Science in Education.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

All courses must be taken for a grade, not for credit/no credit even if offered as an option. Grades in courses transferred to CMU will count in the calculation of the major GPA. A minimum 2.7 GPA (B-) must be earned the major.

In addition to the courses listed below, each student must receive training in safe chemical use and storage and the care of living things from trained personnel prior to applying for student teaching. This major is administered by the Interdisciplinary Science Education Council.

**Required Courses I (16 hours)**

*Life Science*

BIO 111 - Foundations of Evolution and Diversity 4(3-3)

BIO 112 - Foundations of Cell Biology 4(3-3)

BIO 211 - Foundations of Genetics 4(3-3)

BIO 213 - Foundations of Ecology 4(3-3)

**Required Courses II (14 hours)**

*Earth and Space Science*

AST 111 - Astronomy 3(3-0)

AST 112 - Introduction to Astronomical Observations 1(0-2)

GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)

GEO 201 - Weather and Climate 3(2-2)

Plus any 300-level or higher physical/techniques geography, geology, astronomy, or meteorology courses selected in consultation with an advisor.

**Required Courses III (3 hours)**

*Earth and Space Science*

Select one of the following:

GEL 201 - Earth History 3(2-2)

GEL 230 - Prehistoric Life 3(3-0)

**Required Courses IV (22 hours)**

*Physical Science*

CHM 131 - General Chemistry I 4(3-3)

CHM 132 - General Chemistry II 4(3-3)

CHM 342 - Survey of Organic Chemistry 4(3-3)

PHY 130QR - College Physics I 4(4-0)

PHY 131 - College Physics II 4(4-0)

PHY 170 - College Physics Laboratory I 1(0-2)

PHY 171 - College Physics Laboratory II 1(0-2)

**Required Courses V (4 hours)**

*Mathematics*

Select one of the following:

MTH 130 - Pre-Calculus Mathematics 4(4-0)

MTH 132 - Calculus I 4(4-0)

**Required Courses VI (3 hours)**

*Teaching Science*

SCI 400 - Teaching Integrated Science in Secondary School 3(2-2)

**Total: 62 semester hours**

## Leadership Minor

*B.A. degree, B.A.A. degree, B.F.A. degree, B.S. degree, or B.S.B.A. degree*

**Advisors:** Rob Schumacker

The Leadership minor is a 24-credit-hour interdisciplinary program that includes both theoretical and experiential components. The major objective of the program is to educate students for and about leadership and prepare them to acquire leadership positions in their community and profession. The minor complements a wide variety of academic programs such as: recreation, parks and leisure services, business, health professions, communications, psychology, political science, and education. The Leadership Minor is administered by the Department of Recreation, Parks and Leisure Services.

### Required Courses I (12 hours)

COM 461 - Communication in Leadership 3(3-0)  
LDR 200 - Introduction to Leadership 3(2-2)  
LDR 302 - Field Experience in Leadership 3(Spec)  
LDR 499 - Contemporary Issues in Leadership 3(3-0)

### Required Courses II (3 hours)

Select one of the following:

PHL 118 - Moral Problems 3(3-0)  
PHL 318 - Business Ethics 3(3-0)

### Electives (9 hours)

Select three (3) courses from the electives listed below, representing at least two (2) different designators. Students should meet with an advisor in the leadership program for consultation on selecting elective courses. Elective courses are designed to help students explore and understand human behavior and development; interpersonal and group interaction; and view leadership in a social, political or historical context.

BCA 210 - Survey of the Mass Media 4(4-0)  
BLR 310 - Alternative Dispute Resolution in Business 3(3-0)  
CGL 145 - Racism and Discrimination in America through Dialogue 3(3-0)  
COM 195 - Intercultural Communication 3(3-0)  
COM 264 - Communicating in Workplaces 3(3-0)  
COM 267 - Introduction to Debate 3(3-0)  
COM 353 - Small Group Communication 3(3-0)  
HDF 100 - Lifespan Development 3(3-0)  
HSC 203WI - Leadership for the Health Professions 3(3-0)  
HSC 520 - Health Services Administration 3(3-0)  
HST 110 - The American Experience 3(3-0)  
HST 312 - American Military Experience 3(3-0)  
HST 325 - "By Any Means Necessary": African American History, 1877-Present 3(3-0)  
MGT 348 - Dynamics of Organizational Behavior 3(3-0)  
MSA 501 - Managing Change with Emotional Intelligence 3(3-0)  
PSC 101 - Political Behavior 3(3-0)  
PSC 105 - Introduction to American Government and Politics 3(3-0)  
PSC 125 - African-American Politics 3(3-0)  
PSC 275 - Great Political Thinkers 3(3-0)  
PSC 321 - The American Chief Executive 3(3-0)  
PSY 100 - Introduction to Psychology 3(3-0)  
PSY 330 - Social Psychology 3(3-0)  
PSY 336 - Industrial/Organizational Psychology 3(3-0)  
PSY 340 - Studies in Personality 3(3-0)  
RPL 205 - Outdoor Leadership 3(2-2)  
RPL 206 - Recreation Activity Facilitation 3(3-0)  
SOC 100 - Introductory Sociology 3(3-0)  
SOC 201 - Social Psychology 3(3-0)  
SOC 221 - Social Problems 3(3-0)  
WGS 326/PSC 326 - Women and Politics 3(3-0)

**Note:** You may only count one of PSY 330 or SOC 201.

**Total: 24 semester hours**

## Multimedia Design Minor

*B.A. degree, B.A.A. degree, or B.S. degree*

The Multimedia Design Minor consists of 25 semester hours divided into a 13-hour core and 12 hours of electives.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students may not apply more than six (6) hours of course work from their declared major toward this minor.
2. Students are required to achieve a grade of C (2.0) or better in each of the Core Courses of this minor.

### Required Courses (13 hours)

ART 231 - Introduction to Graphic Design 3(0-6)  
BCA 223 - Video Production 3(1-4)  
CPS 282 - Introduction to Multimedia Design 3(3-0)  
JRN 220 - Basic Media Photography 3(3-0)  
MMD 495 - Multimedia Design Capstone 1(1-0)

### Electives (12 hours)

Select from the following in consultation with an advisor. Other electives may be substituted with consent of advisor.

ART 222 - 2D Digital Animation 3-6(Spec)  
ART 224 - 3D Computer Animation I: Foundations 3(0-6)  
ART 235 - Logo and Identity Design 3(0-6)  
ART 241 - Introduction to Photography 3(0-6)  
ART 258 - Everyday Web Design 3(0-6)  
ART 308 - Storyboarding for Digital Media 3-6(Spec)  
ART 349 - Typography 3(0-6)  
ART 441 - Photography Lighting Studio 3(0-6)  
ART 541 - Advanced Photography Studio 1-12(Spec)  
BCA 222 - Audio Production 3(1-4)  
BCA 421 - Advanced Audio Production 3(2-2)  
BCA 440 - Introduction to Cinematography 3(2-2)  
BCA 521 - Advanced Cinematography 3(2-2)  
BCA 522 - Audio Post-Production 3(2-2)  
BCA 532 - Advanced Video/Multimedia Post-Production 3(2-2)  
CPS 165 - Modern Website Design 3(3-0)  
CPS 382 - Advanced Multimedia Design 3(3-0)  
IND 134 - Digital Fundamentals for Interior Design 3(1-3)  
ITC 320 - Web Application Development - Client-Side Scripting 3(3-0)  
ITC 383 - Computer Game Design 3(3-0)  
JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)  
JRN 320 - Photo Editing 3(3-0)  
JRN 340 - Introduction to Digital Journalism 3(3-0)  
JRN 402 - Advanced Media Graphics and Visual Communication 3(3-0)  
JRN 422 - The Picture Story 3(3-0)  
MUS 309 - Electroacoustic Music 3(3-0)

**Note:** Students may also select, as part of their Elective hours, an internship experience through a participating department (3 hours).

**Total: 25 semester hours**



## Museum Studies Minor

*B.A. degree, B.A.A. degree, B.F.A. degree, B.S. degree, or B.S.B.A. degree*

The goal of this interdisciplinary program is to introduce students to the role of museums in society and to the knowledge, skills and abilities required of successful professionals in museums or similar non-profit informal learning institutions. The program prepares students to contribute to the success of these organizations as knowledgeable, collaborative, ethical, and innovative professionals. Upon completion of the program, students should be prepared to enter the workforce or continue their formal education in an academic discipline, museum studies, public history or a related field.

This 24-credit minor is composed of:

- Four 3-credit core courses
- a 6-hour museum internship
- 6 credit hours of electives

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students must have completed 36 credit hours with a cumulative GPA of at least 2.5 in order to enroll in MST 310.
  2. Students must successfully complete MST 310 before signing the minor or enrolling in other MST courses.
  3. Students are required to achieve a grade of at least a C (2.0) in each Museum Studies course.
  4. Students are required to achieve at least a 2.7 GPA in the 18 credit hours of required Museum Studies courses.
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### Required Courses (18 hours)

MST 310 - Introduction to Museums 3(3-0)  
 MST 315 - Museums, Stakeholders and Communities 3(3-0)  
 MST 320 - Collections Stewardship and Curatorial Work 3(3-0)  
 MST 325 - Public Programming in Museums 3(3-0)  
 MST 598 - Museum Internship 6(Spec)

### Electives (6 hours)

Select from the following:

ACC 201 - Concepts of Financial Accounting 3(3-0)  
 ANT 170 - Culture & Human Experience: Introduction to Cultural Anthropology 3(3-0)  
 ANT 171 - Human Origins: Introduction to Biological Anthropology 3(3-0)  
 ANT 175 - Archaeology of the Americas 3(3-0)  
 ANT 240 - Current Native American Issues 3(3-0)  
 ANT 320 - Native North American Cultures 3(3-0)  
 ANT 344 - Michigan Archaeology 3(3-0)  
 ART 231 - Introduction to Graphic Design 3(0-6)

BIO 229 - Nature Study 3(2-3)  
 BIO 306 - Natural History of Vertebrates 3(2-3)  
 COM 264 - Communicating in Workplaces 3(3-0)  
 FMD 252 - Dress and Culture 3(3-0)  
 GEL 100 - Introduction to Earth Systems 3(2-2)  
 GEL 101 - Physical Geology 3(3-0)  
 GEL 102 - Physical Geology Laboratory 1(0-2)  
 GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)  
 GEL 201 - Earth History 3(2-2)  
 GEL 230 - Prehistoric Life 3(3-0)  
 GEL 320 - Earth Materials and Resources 3(2-3)  
 GEO 120 - Digital Earth: Understanding Environmental Change Using Maps 3(3-0)  
 GEO 121 - Human Geography and Globalization 3(3-0)  
 HST 101 - The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)  
 HST 102 - The Development of Western Civilization: From 1700 to the Present 3(3-0)  
 HST 111 - The Quest for Liberty: The United States 1865 3(3-0)  
 HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)  
 HST 301 - The Craft of History 4(4-0)  
 HST 323 - History of Native Americans 3(3-0)  
 HST 333 - History of Michigan 3(3-0)  
 IET 143 - Introduction to Graphic Arts 3(2-2)  
 IND 238 - Design History and Precedent 3(3-0)  
 IND 328 - Design History and Criticism 3(3-0)  
 MGT 312 - Introduction to Management 3(3-0)  
 MKT 300 - Introduction to Marketing 3(3-0)  
 MST 575 - Independent Study in Museum Studies 3(3-0)  
 PAD 210 - Introduction to Public Administration 3(3-0)  
 PHS 151QR - Introductory Physical Science I 3(2-2)  
 RPL 552 - Environmental Interpretation 3(3-0)  
 TAI 170 - Oral Interpretation of Literature 3(3-0)

**Note:** Courses required for a student's major (e.g., HST 301 for students majoring in History or ANT 171 for those majoring in Anthropology) may not be used as an elective course for the Museum Studies Minor.

### Total: 24 semester hours

**Note:** Students minoring in Museum Studies are encouraged to have computer skills in word processing, spreadsheet, database, graphics, and web page concepts at least equivalent to CPS 105, 106, 107, 108, and 165.

**Note:** Students not minoring in Museum Studies must have the permission of the instructor to enroll in MST 315, 320, 325, or 575.

## Music Theatre Major

*B.F.A. degree*

Students wishing to develop the skills necessary to become a professional performer in theatrical genres that combine acting with music and dance need a program that provides training and experience in those areas.

**Music Theatre at CMU.** Students interested in the BFA-Music Theatre program should contact the Office of the Dean, College of the Arts and Media to discuss dates and criteria for the auditions.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

**Admission.** Admission to the program is by audition only. The auditions occur early in the spring semester each year. Auditions are attended by faculty from music, theatre, and dance. Criteria and information about the audition process may be found at <https://www.cmich.edu/academics/colleges/college-arts-media/departments-schools/theatre-dance/music-theatre>, or by contacting the Department of Theatre and Dance, (989) 774-7710, 129 Moore Hall, Central Michigan University, Mt. Pleasant, MI, 48859.

**Retention.** Each year, Music Theatre majors demonstrate their progress as singers/actors in performance examinations known as juries. Juries are held during the final examination time at the end of the spring semester. BFA Music Theatre students will enroll in Applied Voice (MUS 150B) in Fall and Spring semesters of their first year in the BFA Music Theatre program. At the conclusion of the first year, the student will perform a voice jury for the Voice Faculty. The Voice Faculty must approve the student to advance to the second year of study in the BFA Music Theatre program. The student will be given only one attempt at passing the end of first year jury.

Additional criteria for continuing in the program include meeting the current university standard for grade point average (GPA). A student who has been awarded a Music Theatre Scholarship has additional criteria to fulfill. These criteria are listed on the Music Theatre Scholarship material each student receives at the end of each semester. Scholarship students are required to request renewal of the scholarship at the end of each semester.

**Information for Transfer Students.** The principal goal of the Music Theatre program is to provide comprehensive training in the complex area of music theatre that integrates various performance skills (music, theatre, dance) and production experiences into a high quality pre-professional major. All students wishing to become a BFA-Music Theatre major must audition. Information about audition dates and requirements may be found at <https://www.cmich.edu/academics/colleges/college-arts-media/departments-schools/theatre-dance/music-theatre>. Answers to many other questions may be found there as well.

Transfer students often have questions about what courses they should take to prepare for the Music Theatre program. Since each student's background is different, it is difficult to give answers that will apply to all situations. Generally, training in the following areas is recommended but not required to enter the CMU Music Theatre program:

- A. Studies in music, particularly formal voice lessons
- B. Studies in acting, particularly basic acting classes
- C. Studies in dance, particularly basic dance technique classes

### Required Courses I (47 hours)

DAN 126 - Hip Hop 2(1-2)  
 DAN 133 - Modern I 2(1-2)  
 DAN 136 - Ballet I 2(1-2)  
 DAN 137 - Tap I 2(1-2)  
 DAN 138 - Jazz I 2(1-2)  
 MUS 101 - Fundamentals of Music Theory 4(3-2)  
 MUS 102 - Theory and Analysis of Popular Music 4(3-2)  
 MUS 147 - Piano Class I 1(0-2)  
 MUS 148 - Piano Class II 1(0-2)  
 TAI 180 - First-Year Theatre Seminar 2(2-0)  
 TAI 182 - Acting I 3(3-0)  
 TAI 278 - Stage Makeup 3(2-2)  
 TAI 282 - Acting II 3(3-0)  
 TAI 352 - Music Theatre Scene Study 3(1-2)  
 TAI 380 - Musical Theatre History 3(3-0)  
 TAI 381 - Directing 3(3-0)  
 TAI 452 - Music Theatre Performance 3(2-2)  
 TAI 460 - BFA Capstone Project 3(0-6)  
 TAI 499 - Senior Theatre Seminar 1(1-0)

**Note:** Students demonstrating sufficient proficiency as determined by appropriate DAN faculty member(s) may substitute a higher level skills course for DAN 136, DAN 137, and DAN 138. Students demonstrating sufficient proficiency as determined by appropriate MUS faculty member(s) may substitute a higher level skills course for MUS 147 and MUS 148.

### Required Courses II (2 hours)

Participation in one of the following choral ensembles (may be repeated):

MUS 182 - Women's Chorus 1-8(Spec)  
 MUS 183 - Concert Choir 1-8(Spec)  
 MUS 282 - Chamber Singers 1-8(Spec)

### Required Courses III (17 hours)

2 semesters of MUS 150 (4 hours)  
 2 semesters of MUS 250 (4 hours)  
 2 semesters of MUS 350 (4 hours)  
 2 semesters of MUS 450 (4 hours)  
 1 semester of MUS 284 (1 hour)  
 MUS 150 - Voice 1-12(Spec)  
 MUS 250 - Voice 1-12(Spec)  
 MUS 284 - Techniques for the Singing Actor 1-6(Spec)  
 MUS 350 - Voice 1-16(Spec)  
 MUS 450 - Voice 1-8(Spec)

### Required Courses IV (2 hours)

Select two TAI Studio courses for 1 hour each. One studio must be in technical theatre:

### Electives (12 hours)

Select from DAN, MUS, TAI and/or cognate classes in consultation with the advisor.

**Total: 82 semester hours**

## Neuroscience Major: Cellular and Molecular Neuroscience Concentration

*B.S. degree*

Neuroscience is the study of the structure and function of the nervous system and addresses questions spanning from the cellular and molecular level to cognition and behavior. This multidisciplinary major integrates courses in biology, chemistry, health sciences, and psychology. The Cellular and Molecular Neuroscience concentration prepares students for graduate school in neuroscience or biomedical fields, and medical school. For more information, contact [NCS@cmich.edu](mailto:NCS@cmich.edu).

### Neuroscience Core Courses (14 hours)

BIO 487/PSY 487 - Recent Advances in Neuroscience Seminar 2(2-0)  
 BIO 591 - Neurophysiology 3(3-0)  
 NSC 301 - Cell and Molecular Neuroscience 3(3-0)  
 NSC 302 - Foundations of Behavioral and Systems Neuroscience 3(3-0)  
 PSY 588 - Functional Neuroanatomy 3(3-0)

### Required Courses (22 hours)

BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 BIO 112 - Foundations of Cell Biology 4(3-3)  
 BIO 211 - Foundations of Genetics 4(3-3)  
 BIO 392 - Mammalian Physiology 4(3-3)  
 BIO 500 - Biological Statistics 3(2-2)  
 PSY 100 - Introduction to Psychology 3(3-0)

### Other Requirements I: General Chemistry (8 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)

### Other Requirements II: Organic Chemistry (4-8 hours)

Select one of the following options:

#### Option A (4 hours)

CHM 342 - Survey of Organic Chemistry 4(3-3)

#### Option B (8 hours)

CHM 343 - Organic Chemistry I: Foundations 4(4-0)  
 CHM 348 - Organic Chemistry II: Bioorganic 2(2-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)

### Notes:

- Students selecting Option A in Other Requirements II must select Option A in Other Requirements III.
- Students selecting Option B in Other Requirements II may select any option in Other Requirements III.

### Other Requirements III: Biochemistry (3-6 hours)

Select one of the following options:

#### Option A (3 hours)

CHM 421 - Introductory Biochemistry for Health Sciences 3(3-0)

#### Option B (3 hours)

CHM 520 - Introductory Biochemistry 3(3-0)

#### Option C (6 hours)

CHM 521 - Biochemistry I 3(3-0)  
 CHM 522 - Biochemistry II 3(3-0)

### Electives (9 hours)

Students are encouraged to consult with a neuroscience advisor to select the appropriate courses for their intended career path.

Select from the following:

BIO 208 - Microbiology 4(3-3)  
 BIO 325 - Biotechnology 3(1-5)  
 BIO 403WI - Undergraduate Research 3-4(Spec)  
 BIO 537 - Immunology 3(3-0)  
 BIO 544 - Developmental Biology 4(3-3)  
 BIO 545 - Molecular Genetics 3(3-0)  
 BIO 546 - Molecular Genetics Laboratory 1(0-3)  
 BIO 570 - Medical Cell Biology 3-4(Spec)  
 BIO 580 - Medical Microbiology 3(1-5)  
 HON 499 - Senior Project 3-6(Spec)  
 HSC 214 - Human Anatomy 4(3-3)

HSC 411 - Pathophysiology 3(3-0)  
 NSC 397 - Special Topics in Neuroscience 1-4(Spec)  
 NSC 496 - Neuroscience Directed Research 1-6(Spec)  
 NSC 497 - Special Topics in Neuroscience 1-4(Spec)  
 NSC 501 - Principles of Neuroscience I 4(4-0)  
 NSC 502 - Principles of Neuroscience II 4(4-0)  
 NSC 597 - Special Topics in Neuroscience 1-4(Spec)  
 PSY 387 - Behavioral Neuroscience 3(3-0)  
 PSY 496 - Directed Research 1-6(Spec)

### Notes:

- Students who choose BIO 546 must also take BIO 545.
- Up to 3 credits of NSC 496 or BIO 403WI or PSY 496 or HON 499 can count toward the major.
- The following courses may be offered as Writing Intensive: BIO 325, BIO 545, BIO 570, HON 499.

**Total: 60-67 semester hours**

## Neuroscience Major: Clinical Health Neuroscience Concentration

*B.S. degree*

Neuroscience is the study of the structure and function of the nervous system and addresses questions spanning from the cellular and molecular level to cognition and behavior. This multidisciplinary major integrates courses in biology, chemistry, health sciences, and psychology. The Clinical Health Neuroscience concentration prepares students to pursue post-graduate careers in psychology or health professions. For more information, contact [NCS@cmich.edu](mailto:NCS@cmich.edu).

### Neuroscience Core Courses (14 hours)

BIO 487/PSY 487 - Recent Advances in Neuroscience Seminar 2(2-0)  
 BIO 591 - Neurophysiology 3(3-0)  
 NSC 301 - Cell and Molecular Neuroscience 3(3-0)  
 NSC 302 - Foundations of Behavioral and Systems Neuroscience 3(3-0)  
 PSY 588 - Functional Neuroanatomy 3(3-0)

### Required Courses I (9 hours)

PSY 100 - Introduction to Psychology 3(3-0)  
 PSY 211QR - Introduction to Psychological Statistics 3(3-0)  
 PSY 387 - Behavioral Neuroscience 3(3-0)

### Required Courses II (3-4 hours)

Select one of the following:

BIO 101 - General Biology 3(2-2)  
 BIO 105QR - Introductory Quantitative Biology 3(2-2)  
 BIO 112 - Foundations of Cell Biology 4(3-3)  
 BIO 151 - Human Biology 3(3-0)

**Note:** BIO 112 requires BIO 111 as prerequisite.

### Required Courses III (4 hours)

Select one of the following:

BIO 392 - Mammalian Physiology 4(3-3)  
 HSC 215 - Human Physiology 4(3-2)

**Notes:** BIO 208 (listed in Electives) is prerequisite for BIO 392; HSC 214 (listed in Electives) is a pre/co-requisite for HSC 215.

### Other Requirements I: General Chemistry (5-8 hours)

Select one of the following options:

#### Option A (5 hours)

CHM 120 - Survey of Chemistry 4(4-0)  
 CHM 127 - Introductory Chemistry Laboratory 1(0-2)

#### Option B (8 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)

### Notes:

- Students selecting Option A in Other Requirements I must select Option A in Other Requirements II.
- Students selecting Option B in Other Requirements I may select any option in Other Requirements II.

**Other Requirements II: Organic Chemistry (4-8 hours)**

Select one of the following options:

**Option A (4 hours)**

CHM 342 - Survey of Organic Chemistry 4(3-3)

**Option B (8 hours)**

CHM 343 - Organic Chemistry I: Foundations 4(4-0)

CHM 348 - Organic Chemistry II: Bioorganic 2(2-0)

CHM 349 - Organic Chemistry Laboratory 2(0-6)

**Notes:**

- Students selecting Option A in Other Requirements II must select Option A in Other Requirements III.
- Students selecting Option B in Other Requirements II may select any option in Other Requirements III.

**Other Requirements III: Biochemistry (3-6 hours)**

Select one of the following options:

**Option A (3 hours)**

CHM 421 - Introductory Biochemistry for Health Sciences 3(3-0)

**Option B (3 hours)**

CHM 520 - Introductory Biochemistry 3(3-0)

**Option C (6 hours)**

CHM 521 - Biochemistry I 3(3-0)

CHM 522 - Biochemistry II 3(3-0)

**Electives (12 hours)**

Students are encouraged to consult with a neuroscience advisor to select the appropriate courses for their intended career path.

BIO 208 - Microbiology 4(3-3)

BIO 315 - Human Genetics 3(3-0)

BIO 318 - Introduction to Animal Behavior 3(3-0)

BIO 403WI - Undergraduate Research 3-4(Spec)

HON 499 - Senior Project 3-6(Spec)

HSC 214 - Human Anatomy 4(3-3)

HSC 235 - Psychoactive Drugs 3(3-0)

HSC 308 - Physiology of Sport and Exercise 3(3-0)

HSC 411 - Pathophysiology 3(3-0)

NSC 397 - Special Topics in Neuroscience 1-4(Spec)

NSC 496 - Neuroscience Directed Research 1-6(Spec)

NSC 497 - Special Topics in Neuroscience 1-4(Spec)

NSC 501 - Principles of Neuroscience I 4(4-0)

NSC 502 - Principles of Neuroscience II 4(4-0)

NSC 597 - Special Topics in Neuroscience 1-4(Spec)

PSY 220 - Developmental Psychology 3(3-0)

PSY 225/PHL 225 - Foundations of Cognitive Science 3(3-0)

PSY 250 - Abnormal Psychology 3(3-0)

PSY 382 - Perception 3(3-0)

PSY 383 - Learning and Memory 3(3-0)

PSY 384 - Behavior Analysis 3(2-2)

PSY 496 - Directed Research 1-6(Spec)

PSY 509 - Behavioral Pharmacology 3(3-0)

PSY 584 - Cognitive Neuroscience 3(3-0)

PSY 589 - Cognitive Psychology 3(3-0)

**Notes:**

- Up to 3 credits of NSC 496 or BIO 403WI or PSY 496 or HON 499 can count toward the major.

- The following course may be offered as Writing Intensive: HON 499.

**Total: 54-65 semester hours**

**Organizational Leadership Major**

*B.A.A. degree or B.S. degree*

The 39-semester hour Organizational Leadership major is designed for students and professionals who seek to make a greater contribution in an organization. The major focuses on how individuals interact within organizations; assess the current challenges in leadership from a historical and current context; analyze and integrate theories of leadership within a personal and professional context; and evaluate behaviors in organizations to understand effective leadership, communication and ethical practices for decision-making.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Any student in good academic standing may declare a major in Organizational Leadership. The student must meet with an advisor for academic planning before registering for classes.

A minimum 2.0 GPA (C) must be earned in the major.

No more than a total of 27 semester hours earned in business courses, including business transfer hours, may be counted toward graduation.

**Core Courses (33 hours)**

COM 195 - Intercultural Communication 3(3-0)

COM 461 - Communication in Leadership 3(3-0)

LDR 200 - Introduction to Leadership 3(2-2)

LDR 302 - Field Experience in Leadership 3(Spec)

LDR 499 - Contemporary Issues in Leadership 3(3-0)

MSA 501 - The Emotionally Intelligent Organization 3(3-0)

MSA 503 - Gender and Generational Supervision 3(3-0)

MSA 506 - Evaluation, Coaching and Mentoring 3(3-0)

MSA 510 - The Culturally Intelligent Organization 3(3-0)

PAD 211 - Introduction to Nonprofit Leadership 3(3-0)

PHL 318 - Business Ethics 3(3-0)

**Electives (6 hours)**

Select from the following:

CED 555/MSA 555 - Human Relations Skills 3(3-0)

ENT 210 - Accounting Concepts for Entrepreneurs 3(3-0)

HST 312 - American Military Experience 3(3-0)

MGT 312 - Introduction to Management 3(3-0)

MGT 348 - Dynamics of Organizational Behavior 3(3-0)

MKT 300 - Introduction to Marketing 3(3-0)

PAD 210 - Introduction to Public Administration 3(3-0)

PAD 411 - Public Sector Human Resources 3(3-0)

PAD 523WI - Fundamentals of Grant Writing and Management 3(3-0)

PSC 321 - The American Chief Executive 3(3-0)

PSY 100 - Introduction to Psychology 3(3-0)

PSY 336 - Industrial/Organizational Psychology 3(3-0)

**Total: 39 semester hours**

**Note:** A currently enrolled CMU student majoring in Organizational Leadership may choose to pursue an accelerated Master of Science in Administration (MSA) degree. The accelerated MSA program will allow an Organizational Leadership major to reduce the total number of credits to complete their graduate degree by 12 semester hours. Admission criteria for the Accelerated MSA program can be located in the MSA section of the Graduate Bulletin. See your academic advisor for details.



## Social Science Major

*B.A. degree or B.S. degree*

The Social Science Major is an interdisciplinary program useful for students with a general interest in the social sciences. The major complements a wide variety of minors in the social sciences as well as minors in communications, entrepreneurship, sustainability and environmental policy, geographic information science, journalism, leadership, and military science. The major is also a flexible program useful for students who are changing their majors late in their undergraduate program. The Social Science major is similar to the social studies major, but does not lead to K-12 certification. Students will be assigned an advisor in their focus area or be advised by the Chair of the Social Science Council.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Count no grade lower than C- toward the major.
2. Double count no more than nine hours from an accompanying minor.

### Required Courses I (12 hours)

GEO 121 - Human Geography and Globalization 3(3-0)  
HST 111 - The Quest for Liberty: The United States to 1865 3(3-0)  
PSC 105 - Introduction to American Government and Politics 3(3-0)  
plus one additional course in Economics (ECO) or Sociology (SOC) for 3 hours.

### Required Courses II (9-10 hours)

Select 9 to 10 hours, one course from each of the following groups:

#### Group 1

Select one of the following:

GEO 350 - United States and Canada 3(3-0)  
GEO 373 - Latin America 3(3-0)

#### Group 2

Select one of the following:

HST 301 - The Craft of History 4(4-0)  
HST 333 - History of Michigan 3(3-0)

#### Group 3

Select one of the following:

PSC 150 - Introduction to International Relations 3(3-0)  
PSC 261 - State and Local Government 3(3-0)

### Required Courses III (12 hours)

Twelve (12) additional hours in a single social science discipline from the following designators: ECO, GEO, HST, PSC, or SOC. At least six of these hours must be at the 300 level or higher.

### Required Courses IV (1 hour)

Select one of the following:

GEO 397 - Independent Study 1-6(Spec)  
HST 497 - Special Studies 1-6(Spec)  
PSC 390 - Independent Study 1-6(Spec)  
PSC 590 - Independent Study 1-6(Spec)

**Note:** Students must enroll in one of the four courses listed above for one credit hour in consultation with the major advisor to complete a portfolio project on a social science topic appropriate to the area of emphasis.

### Electives (3 hours)

Three additional hours at the 300 level or higher in a discipline other than the one chosen in Required Courses III, from one of the following designators: ECO, GEO, HST, PSC, or SOC.

**Total: 37-38 semester hours**

## Social Studies Major: Geography Concentration 6-12

*B.S. in Ed. degree, Secondary Standard Certificate*

The Social Studies major requires an accompanying minor in History. Double counting between the major and minor is not allowed.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

In order to be recommended for student teaching, a student must:

1. Count no course with a grade lower than C- toward the major.
2. Have a minimum of 15 credit hours on the major taken at CMU and a cumulative average in the major of at least 3.0.
3. Complete a departmental application form.
4. Have a grade of C+ or higher in the teaching methods course.
5. Have no more than six hours taken as CR/NC, including PSC 305.
6. Have a minimum of 14 credit hours at the 300 level or higher.
7. Successfully complete 30 hours of pre-student teaching as part of GEO 400.

### Required Courses I (6 hours)

*American Government*

PSC 105 - Introduction to American Government and Politics 3(3-0)  
PSC 261 - State and Local Government 3(3-0)

### Required Courses II (3 hours)

*American Government*

Select one of the following:

PSC 320 - The American Legislative Process 3(3-0)  
PSC 321 - The American Chief Executive 3(3-0)  
PSC 322 - Judicial Process and Politics 3(3-0)

### Required Courses III (6 hours)

*World Geography*

GEO 121 - Human Geography and Globalization 3(3-0)  
GEO 203QR - Introduction to Geographic Information Science 3(2-2)

### Required Courses IV (3 hours)

*World Geography*

Select one of the following:

GEO 317 - Economic Geography 3(3-0)  
GEO 320 - Population Geography 3(3-0)  
GEO 340 - Urban Geography 3(3-0)  
GEO 342 - Historical Geography 3(3-0)  
GEO 345 - Political Geography 3(3-0)

### Required Courses V (6 hours)

*Economics*

ECO 201 - Principles of Macroeconomics 3(3-0)  
ECO 202 - Principles of Microeconomics 3(3-0)

### Required Courses VI (3 hours)

*Economics*

Select one of the following:

ECO 281 - Economic Development of the Pacific Rim 3(3-0)  
ECO 301 - Environmental Economics 3(3-0)  
ECO 310 - American Economic Development 3(3-0)  
ECO 350/BLR 350 - Law and Economics 3(3-0)  
ECO 372 - International Economics 3(3-0)  
ECO 381 - Patterns of Economic Development 3(3-0)

### Required Courses VII (6 hours)

*Geography Concentration*

GEO 350 - United States and Canada 3(3-0)  
GEO 400 - Geographic Education 3(2-2)

### Required Courses VIII (3 hours)

*Geography Concentration*

Select one of the following:

GEO 312 - Geography of Contemporary Global Issues 3(3-0)  
GEO 346 - Geography of the Developing World 3(3-0)  
GEO 365 - A Geography of Modern Europe 3(3-0)  
GEO 373 - Latin America 3(3-0)  
GEO 385 - China: Environment and People 3(3-0)

### Electives (3 hours)

*Geography Concentration*

Select one of the following:

GEO 105 - Physical Geography 3(2-2)

GEO 120 - Digital Earth: Understanding Environmental Change Using Maps 3(3-0)

GEO 330 - Natural Resource Conflicts and Sustainable Development 3(3-0)

**Total: 39 semester hours**

## Social Studies Major: Political Science Concentration 6-12

*B.S. in Ed. degree, Secondary Standard Certificate*

The Social Studies major requires an accompanying minor in History. Double counting between the major and minor is not allowed.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

In order to be recommended for student teaching, a student must:

1. Count no course with a grade lower than C- toward the major.
2. Have a minimum of 15 credit hours on the major taken at CMU and a cumulative average in the major of at least 3.0.
3. Have a grade of C+ or higher in the teaching methods course.
4. Have no more than six hours taken as CR/NC, including PSC 305.
5. Have a minimum of 14 credit hours at the 300 level or higher.

### Required Courses I (6 hours)

*American Government*

PSC 105 - Introduction to American Government and Politics 3(3-0)

PSC 261 - State and Local Government 3(3-0)

### Required Courses II (3 hours)

*American Government*

Select one of the following:

PSC 320 - The American Legislative Process 3(3-0)

PSC 321 - The American Chief Executive 3(3-0)

PSC 322 - Judicial Process and Politics 3(3-0)

### Required Courses III (6 hours)

*World Geography*

GEO 121 - Human Geography and Globalization 3(3-0)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)

### Required Courses IV (3 hours)

*World Geography*

Select one of the following:

GEO 317 - Economic Geography 3(3-0)

GEO 320 - Population Geography 3(3-0)

GEO - Urban Geography 3(3-0)

GEO 342 - Historical Geography 3(3-0)

GEO 345 - Political Geography 3(3-0)

### Required Courses V (6 hours)

*Economics*

ECO 201 - Principles of Macroeconomics 3(3-0)

ECO 202 - Principles of Microeconomics 3(3-0)

### Required Courses VI (3 hours)

*Economics*

Select one of the following:

ECO 281 - Economic Development of the Pacific Rim 3(3-0)

ECO 301 - Environmental Economics 3(3-0)

ECO 310 - American Economic Development 3(3-0)

ECO 350/BLR 350 - Law and Economics 3(3-0)

ECO 372 - International Economics 3(3-0)

ECO 381 - Patterns of Economic Development 3(3-0)

### Required Courses VII (5 hours)

*Political Science Concentration*

PSC 305 - Midtier Teaching in Political Science 2(1-2)

PSC 405 - Methods for Teaching Political Science 3(3-0)

### Required Courses VIII (3 hours)

*Political Science Concentration*

Select one of the following:

PSC 150 - Introduction to International Relations 3(3-0)

PSC 151QR - The U.S. and the World 3(3-0)

### Required Courses IX (6 hours)

*Political Science Concentration*

Select two of the following:

PSC 320 - The American Legislative Process 3(3-0)

PSC 321 - The American Chief Executive 3(3-0)

PSC 322 - Judicial Process and Politics 3(3-0)

PSC 323 - American Parties and Politics 3(3-0)

PSC 327 - Lobbying and Interest Group Behavior 3(3-0)

PSC 421 - Constitutional Law: Powers of Government 3(3-0)

PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)

**Total: 41 semester hours**

## Teaching English Learners Minor

*B.S. in Ed. degree, Standard Elementary or Secondary Certificate*

This minor is housed in the College of Education and Human Services. For more information, contact the Department of Teacher and Special Education.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To receive a Teaching English Learners Minor, students must complete a program of 24 credit hours and have a minimum GPA of 2.7 for this minor.

In addition, they must have documented experience of two semesters (or the equivalent) of college level study in learning a second language.

To attain a State of Michigan ESL teaching endorsement, candidates must also pass the Language (126) Michigan Test for Teacher Certification (MTTC).

### Required Courses I (21 hours)

ENG 175 - The Nature of Language 3(3-0)

TEL 300 - Teaching Multilingual Learners: Birth-Grade 1 3(3-0)

TEL 301 - Teaching Multilingual Learners: Grades PK-6 3(3-0)

TEL 302 - Teaching Multilingual Learners: Grades 5-12 3(3-0)

TEL 500 - Assessment Practices for Teachers of Multilingual Learners 3(3-0)

TEL 501 - Teaching Multilingual Learners in the Sociocultural Context 3(3-0)

TEL 502 - Practicum in Teaching Multilingual Learners 3(3-0)

**Note:** ENG 175 may be offered as WI and fulfills UP Group III-B.

### Required Courses II (3 hours)

Select one of the following:

HDF 205 - Teaching and Learning about Race in Early Childhood 3(3-0)

SPE 250 - Reaching and Teaching Diverse Learners 3(Spec)

SPE 550WI - Teaching Diverse Students in Educational Settings 3(3-0)

**Note:** HDF 205 may be offered as WI and fulfills UP Group IV-C.

**Total: 24 semester hours**

## Women and Gender Studies Minor

*B.A. degree, B.A.A. degree, B.S. degree, or B.S.B.A. degree*

The director of the Women and Gender Studies Program serves as advisor for all students taking this minor.

### Core Courses (9 hours)

WGS 100 - How Gender Affects Our Lives 3(3-0)

WGS 426/PHL 426/PSC 426 - Feminist Theory 3(3-0)

WGS 496 - Capstone Seminar in Women and Gender Studies 3(3-0)

### Required Courses I (3 hours)

#### *LGBTQ Studies*

Select one of the following:

WGS 204/ENG 204/SOC 204 - LGBTQ Identities 3(3-0)

WGS 280/FMD 280 - Queer Fashion 3(3-0)

WGS 351/BCA 351/BCA 351WI - Queer Cinema 3(2-2)

### Required Courses II (3 hours)

#### *Race and Ethnicity Through an Intersectional Lens*

Select one of the following:

CGL 145/IGR 145/IGR 145L - Racism and Racial Justice through Dialogue 3(3-0)

ENG 333 - Literatures of Non-Western Cultures 3-6(3-0)

HST 120 - Unlikely Princesses: Women of World History 3(3-0)

SOC 323 - Racism and Inequality 3(3-0)

WGS 207/REL 207 - Women in Religion 3(3-0)

WGS 325/SPN 325 - Telenovelas, Streaming Media and Hispanic/Latino Feminist Movements 3(3-0)

### Electives (6 hours)

Select two courses from any WGS or WGS cross-listed course. Cross-listed courses may be selected from Required Courses I or II but cannot count toward both requirements.

**Total: 21 semester hours**

## Interdisciplinary Undergraduate Certificates

See *Undergraduate Certificates* in the Index for more information.

### Undergraduate Certificate - African and African Diaspora Studies

*College of Liberal Arts and Social Sciences*

This 18-credit hour certificate is designed for degree-seeking students in any major and non-degree-seeking students who want to become more proficient in this in-depth area of global studies, an area of expertise sought after by businesses; local, state, and federal government agencies; nonprofit and nongovernmental (NGO) organizations; health care and social service professions; and any other workplace or setting that requires people to talk across cultural differences. Students will gain greater competency in their understanding of the peoples and cultures of Africa and the African Diaspora along with increased knowledge of historical and contemporary issues relevant to Africa and the African Diaspora.

This certificate is granted upon completion of 18 hours from the courses outlined below.

Contact the Department of History, World Languages, and Culture for more information.

#### Required Courses (12 hours)

Select from the following:

ANT 322 - Cultures of Africa 3(3-0)

ENG 329 - African American Literature 3(3-0)

HST 176 - The African Experience 3(3-0)

HST 324 - "Death is Better than Slavery": African American History to 1877 3(3-0)

HST 325 - "By Any Means Necessary": African American History, 1877-Present 3(3-0)

PSC 125 - African-American Politics 3(3-0)

#### Electives (6 hours)

Select from the following:

ANT 322 - Cultures of Africa 3(3-0)

BCA 300 - African and African American Film 3(3-0)

ENG 329 - African American Literature 3(3-0)

ENG 333 - Literatures of Non-Western Cultures 3-6(3-0)

HST 176 - The African Experience 3(3-0)

HST 324 - "Death is Better than Slavery": African American History to 1877 3(3-0)

HST 325 - "By Any Means Necessary": African American History, 1877-Present 3(3-0)

HST 376 - East/Central Africa: Issues 3(3-0)

HST 377 - West Africa 3(3-0)

HST 379/HUM 340 - Race, Class and Power: South Africa in the 20th Century 3(3-0)

HST 576 - Colonialism in Africa, 1880s-1960s 3(3-0)

PHL 345/PSC 325/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)

PSC 125 - African-American Politics 3(3-0)

PSC 340 - African Political Systems and Processes 3(3-0)

REL 240 - African-American Religion 3(3-0)

Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor.

Courses selected for the certificate program must include a minimum of 9 hours at the 300-599 level.

**Total: 18 semester hours**

## Undergraduate Certificate in Cultural Competency

*College of Liberal Arts and Social Sciences*

This 16-18-credit hour certificate is designed for degree-seeking students in any major and non-degree-seeking students who want to become more proficient in this in-depth area of global studies, an area of expertise sought after by businesses; local, state, and federal government agencies; nonprofit and nongovernmental (NGO) organizations; health care and social service professions; and any other workplace or setting that requires people to talk across cultural differences. Students will gain greater competency in their understanding of cultures and people and whose social identities are different from the students' own. This certificate will also help students to understand and articulate the benefits of diversity for everyone and to interact effectively with people from diverse cultures and social groups.

Contact the Department of Philosophy, Anthropology, and Religion for more information.

### Cultural Competency

16-18 hours from the following:

#### Required Courses I (6 hours)

CGL 145 - Racism and Discrimination in America through Dialogue 3(3-0)

SOC 323 - Racism and Inequality 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

CGL 445 - Intergroup Dialogue Facilitation 3(3-0)

COM 195 - Intercultural Communication 3(3-0)

HSC 532 - Diversity Issues in the Health Professions 3(3-0)

JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)

MGT 365 - International Business 3(3-0)

MKT 560 - International Marketing 3(3-0)

PSY 533 - Psychology of Racism 3(3-0)

SPE 550WI - Teaching Diverse Students in Educational Settings 3(3-0)

Another course focusing on diversity in a career-related field may be substituted with a Cultural and Global Studies advisor's approval.

### Electives

Select one of the following options:

#### Elective Courses Option A (7 hours)

*with Language Elective*

1. Cultures within the United States (3 hours) - Select 3 hours from courses in U.P. Group IV-C. One 3-hour non-UP course on cultures within the United States may be substituted with permission of advisor.
2. Global Cultures outside the United States (4 hours) - Select one language course.

#### Elective Courses Option B (9 hours)

*without Language Elective*

1. Cultures within the United States (3-6 hours) - Select 3-6 hours from courses in U.P. Group IV-C. One 3-hour non-UP course on cultures within the United States may be substituted with permission of advisor.
2. Global Cultures outside the United States (3-6 hours) - Select 3-6 hours from courses in U.P. Group IV-B focusing on regions and topics outside the United States except language courses, which may not be included in Option B of the certificate program. One 3-hour non-U.P. course on global cultures may be substituted with permission of advisor.

Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor.

**Total: 16-18 hours**

## Undergraduate Certificate in East Asian Studies

*College of Liberal Arts and Social Sciences*

This 16-credit hour certificate is designed for degree-seeking students in any major and non-degree-seeking students who want to become more proficient in this in-depth area of global studies, an area of expertise sought after by businesses; local, state, and federal government agencies; nonprofit and nongovernmental (NGO) organizations; health care and social service professions; and any other workplace or setting that requires people to talk across cultural differences. Students will gain greater competency in their understanding of the peoples and cultures of East Asia along with increased knowledge of historical and contemporary issues relevant to East Asia.

Contact the Department of History, World Languages, and Culture for more information.

16 hours chosen from the following:

### Required Courses I (4 hours)

Select one of the following:

CHN 101 - Elementary Chinese I 4(4-0)

CHN 102 - Elementary Chinese II 4(4-0)

JPN 101 - Elementary Japanese I 4(4-0)

JPN 102 - Elementary Japanese II 4(4-0)

### Required Courses II (3 hours)

Select one of the following:

HST 168 - Modern East Asia 3(3-0)

REL 220 - Religious Traditions of China 3(3-0)

REL 221 - Religious Traditions of Japan 3(3-0)

### Required Courses III (3 hours)

PSC 344 - East Asian Political Systems and Processes 3(3-0)

### Electives (6 hours)

Select from the following:

GEO 385 - China: Environment and People 3(3-0)

HST 369 - Traditional China 3(3-0)

HST 370 - Modern China 3(3-0)

JPN 310 - Study Abroad 1-12(Spec)

JPN 410 - Study Abroad 1-12(Spec)

**Note:** You may choose only one of JPN 310 or 410, for 3 hours.

Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor.

Courses selected for the certificate program must include a minimum of 9 hours at the 300-599 level.

**Total: 16 semester hours**



## Undergraduate Certificate in Integration of Science, Technology and Engineering (InSciTE)

*College of Science and Engineering*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Admission to InSciTE program is based on an application and interview process that happens every Fall semester. Workshops will be held by CSE to help students navigate the application and provide mentoring. To apply for admission to the program, students must do the following:

1. Be admitted to Central Michigan University as a degree-seeking student intending to major in a College of Science and Engineering program.
2. Fill out the application, which contains a couple of short (<500 words) essays asking students about their career goals, past experiences in STEM, and their approach to teamwork. The application will be available at the CSE website.
3. Be interviewed by InSciTE Council faculty, who will evaluate whether the student is a good match for InSciTE based on a number of criteria.

Admission will follow a transparent policy where criteria for acceptance into the program will rely on opportunities for growth and achievements rather than strong GPAs or test scores.

Once admitted to the program students must achieve a grade of C (2.0) or better in each certificate course to continue in the program and earn the certificate.

### Required Courses (15 hours)

SCI 115 - Global Challenges, STEM Solutions 3(3-0)  
 SCI 215 - Sharing STEM Knowledge 3(3-0)  
 SCI 315 - STEM Project Management 3(2-2)  
 SCI 415 - Interdisciplinary STEM Solutions I 3(1-3)  
 SCI 416 - Interdisciplinary STEM Solutions II 3(1-3)

**Total: 15 semester hours**

## Undergraduate Certificate in Latin American and Latino Studies

*College of Liberal Arts and Social Sciences*

This 16-18-hour certificate is designed for degree-seeking students in any major and non-degree-seeking students who want to become more proficient in this in-depth area of global studies, an area of expertise sought after by businesses; local, state, and federal government agencies; nonprofit and nongovernmental (NGO) organizations; health care and social service professions; and any other workplace or setting that requires people to talk across cultural differences. Students will gain greater competency in their understanding of the peoples and cultures of Latin America and Latino culture in the U.S. along with increased knowledge of historical and contemporary issues relevant to Latin America and the Latino community in the U.S.

Contact the Department of History, World Languages, and Culture for more information.

16-18 hours chosen from the following:

### Required Courses I (6 hours)

Select two of the following:  
 ANT 321 - Cultures of Latin America 3(3-0)  
 GEO 373 - Latin America 3(3-0)  
 HST 163 - The Latin American Experience 3(3-0)  
 PSC 348 - Latin American Political Systems 3(3-0)

### Required Courses II (6 hours)

Select two of the following:  
 CGL 350 - Latino Culture in the U.S. 3(3-0)  
 CGL 351 - Living in America: Social Structures in Latino Culture 3(3-0)  
 CGL 353/ANT 353 - Contested Boundaries: The US-Mexico Border 3(3-0)

### Electives (4-6 hours)

Select from the following:

ANT 175 - Archaeology of the Americas 3(3-0)  
 ANT 340 - South American Archaeology 3(3-0)  
 CGL 302 - Cultural and Global Studies Internship 1-3(Spec)  
 HST 261 - Indigenous Peoples of Latin America: Precontact to 1821 3(3-0)  
 HST 361/REL 361 - Sinners and Saints of Colonial Latin America 3(3-0)  
 PSC 352 - US - Latin American Relations 3(3-0)  
 SPN 377 - Culture and Civilization of Latin America 3(3-0)  
 SPN 390 - Chicano/Latino Experience in the US 3(3-0)

**Total: 16-18 semester hours**

### Notes:

- 6-8 credit hours of SPN or POR at the 100- and 200-level may be included. Retroactive credit WILL NOT be accepted.
- Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor.
- Courses selected for this track must include a minimum of 9 hours at the 300-599 level.

## Undergraduate Certificate in Native American and Indigenous Studies

*College of Liberal Arts and Social Sciences*

This 18-credit hour certificate is designed for degree-seeking students in any major and non-degree-seeking students who want to become more proficient in this in-depth area of global studies, an area of expertise sought after by businesses; local, state, and federal government agencies; nonprofit and nongovernmental (NGO) organizations; health care and social service professions; and any other workplace or setting that requires people to talk across cultural differences. Students will gain greater competency in their understanding of diverse Native American histories and cultures. The certificate will also help students gain greater understanding and appreciation of current issues relevant to Native American people and steps Native Americans are taking to build and strengthen their communities.

Contact the Department of History, World Languages, and Culture for more information.

18 credit hours from the following:

### Required Courses (9 hours)

ANT 320 - Native North American Cultures 3(3-0)  
 ENG 328 - Native American Literature and Film 3(3-0)  
 HST 323 - History of Native Americans 3(3-0)

### Electives (9 hours)

Select from the following:

ANT 175 - Archaeology of the Americas 3(3-0)  
 ANT 240 - Current Native American Issues 3(3-0)  
 OJB 101 - Elementary Ojibwe I 3(3-0)  
 OJB 102 - Elementary Ojibwe II 3(3-0)  
 SOC 323 - Racism and Inequality 3(3-0)

Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor.

Courses selected for the certificate program must include a minimum of 9 hours at the 300-599 level.

**Total: 18 semester hours**

## Interdepartmental Programs

*This section lists majors and minors that are interdepartmental.*

### Majors

#### Teaching Grades PK-3 Major

*B.S. in Education (Standard Certificate, ECE)*

A minimum of a 2.8 GPA must be earned in all teaching majors. The purpose of the Teaching Grades PK-3 major is to prepare educators to address the needs of the whole-child; use relevant, research-based criteria to establish a supportive, engaging environment that fosters, learning; and use practices that meets the needs of all learners. This Learner-Centered major prepares the educator in areas of Literacy, Mathematics, Science, and Social Studies to teach students in grades PK-3 in a self-contained classroom or departmentalized setting.

Teaching Grades PK-3 major is housed and shared by the Departments of Human Development and Family Studies and Teacher and Special Education. The major combines courses in the departments of Teacher and Special Education, Sciences, English, Early Childhood Development and Learning, Mathematics, and Social Studies. A minimum 2.8 must be earned in this major.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of a 2.8 must be earned in the Teaching Grades PK-3 Major.
2. Complete EDU 107 with a B or higher.
3. All Professional Education Courses (list courses) must be completed with a C+ or higher.
4. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
5. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.

Classes that require a C+ or higher on the major: EDU 330, EDU 342, EDU 380, HDF 402, HDF 403, HDF 409.

Students must earn a grade of C or better in MTH 150, MTH 250, and MTH 350.

**Note:** 12 credit hours double count on the University Program

#### Required Courses (75 hours)

BIO 165 - Life Science for Elementary Teachers 3(2-3)  
 EDU 330 - Foundations of Reading Instruction 3(3-0)  
 EDU 335 - Early Literacy 3(3-0)  
 EDU 342 - Word Study and Fluency: PK-3 3(3-0)  
 EDU 380WI - Interdisciplinary Methods and Pre-Student Teaching (Math & Literacy, PK- 6(6-0)  
 ENG 381WI - Children's Literature 3(3-0)  
 GEL 285/GEO 285 - Earth Systems Science for Elementary Teachers 3(2-2)  
 HDF 200 - Constructivism as a Tool for Learning 2(2-0)  
 HDF 303 - Early Childhood Development 4(Spec)  
 HDF 360 - Integration of Content in Early Childhood through Play 4(Spec)  
 HDF 400 - Developmental Assessment of Children 3(3-0)  
 HDF 402 - Guidance for Young Children 3(Spec)  
 HDF 403 - Best Practices in Early Childhood Settings 3(3-0)  
 HDF 409 - Lead Teaching Methods in Early Childhood (Science and Social Studies) 6(Spec)  
 HDF 508 - Early Childhood Program Administration and Leadership 3(3-0)  
 HST 210WI - United States History through Michigan Eyes 3(3-0)  
 MTH 150 - The Teaching of Counting and Whole Numbers 3(3-0)  
 MTH 250 - The Teaching of Fractions, Decimals, and Proportional Reasoning 3(3-0)  
 MTH 350 - The Teaching of Patterns, Shapes, Measurement and Data 3(3-0)  
 PHS 151QR - Introductory Physical Science I 3(2-2)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)  
 SCI 385 - Science and Engineering Practices for Teaching PK-6 2(1-2)  
 SPE 585 - Early Childhood Special Education 3(3-0)

**Total: 75 semester hours**

## Teaching Grades PK-3 with Special Education Major

*B.S. in Education (Standard Certificate, ECE)*

A minimum of a 2.8 GPA must be earned in all teaching majors.

The purpose of the Teaching Grades PK-3 major paired with a Special Education major is designed to prepare educators to address the needs of the whole-child; use relevant, research-based criteria to establish a supportive, engaging environment that fosters learning; and use practices that meets the needs of all learners including students with disabilities. This Learner-Centered major prepares the educator in areas of Literacy, Mathematics, Science, and Social Studies to teach students in grades PK-3 in a self-contained classroom or departmentalized setting. The Teaching Grades 3-6 major paired with Special Education EI or CI will prepare candidates to be certified in grades 3-6 and special education K-12.

Teaching Grades PK-3 major is housed and shared by the Departments of Human Development and Family Studies and Teacher and Special Education. The special education Cognitive Impairment and Emotional Impairment majors are housed in the Department of Teacher and Special Education. The Teaching Grades PK-3 major combines courses in the departments of Teacher and Special Education, Sciences, English, Early Childhood Development and Learning, Mathematics, and Social Studies. A minimum 2.8 must be earned in this major. For information on the special education majors, refer to the Department of Teacher and Special Education.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of a 2.8 must be earned in the Teaching Grades PK-3 Major.
2. Complete EDU 107 with a B or higher.
3. All Professional Education Courses (list courses) must be completed with a C+ or higher.
4. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
5. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.

Classes that require a C+ or higher on the major: EDU 330, EDU 342, EDU 380, HDF 402, HDF 403, HDF 409.

Students must earn a grade of C or better in MTH 150, MTH 250, and MTH 350.

This major is taken with the Special Education Major: Teachers of Students with Cognitive Impairment or Special Education Major: Teachers of Students with Emotional Impairment.

Note: 12 credit hours double count on the University Program.

### Required Courses (64 hours)

BIO 165 - Life Science for Elementary Teachers 3(2-3)  
 EDU 330 - Foundations of Reading Instruction 3(3-0)  
 EDU 342 - Word Study and Fluency: PK-3 3(3-0)  
 EDU 380WI - Interdisciplinary Methods and Pre-Student Teaching (Math & Literacy, PK-6 6(6-0)  
 ENG 381WI - Children's Literature 3(3-0)  
 GEL 285/GEO 285 - Earth Systems Science for Elementary Teachers 3(2-2)  
 HDF 303 - Early Childhood Development 4(Spec)  
 HDF 360 - Integration of Content in Early Childhood through Play 4(Spec)  
 HDF 402 - Guidance for Young Children 3(Spec)  
 HDF 403 - Best Practices in Early Childhood Settings 3(3-0)  
 HDF 409 - Lead Teaching Methods in Early Childhood (Science and Social Studies) 6(Spec)  
 HST 210WI - United States History through Michigan Eyes 3(3-0)  
 MTH 150 - The Teaching of Counting and Whole Numbers 3(3-0)  
 MTH 250 - The Teaching of Fractions, Decimals, and Proportional Reasoning 3(3-0)  
 MTH 350 - The Teaching of Patterns, Shapes, Measurement and Data 3(3-0)  
 PHS 151QR - Introductory Physical Science I 3(2-2)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)  
 SCI 385 - Science and Engineering Practices for Teaching PK-6 2(1-2)  
 SPE 585 - Early Childhood Special Education 3(3-0)

**Total: 64 semester hours**

## Minors

### Advertising Minor

*B.A. degree, B.A.A. degree, B.S. degree, or B.S.B.A. degree*

The Advertising Minor is offered by the Department of Journalism and the Department of Marketing, Hospitality, and Logistics. The minor brings together courses designed to provide skills for the student with a career interest in advertising. It also provides a working knowledge of advertising for those in careers closely related to advertising.

### Required Courses I (6 hours)

JRN 360 - Advertising Principles 3(3-0)  
 MKT 300 - Introduction to Marketing 3(3-0)

### Electives (18 hours)

Select six of the following:

JRN 101 - Media and Society 3(3-0)  
 JRN 102 - Introduction to Journalism 3(3-0)  
 JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)  
 JRN 353 - Foundations of Strategic Public Relations 3(3-0)  
 JRN 361 - Writing for Advertising 3(3-0)  
 JRN 365 - Advertising Media 3(3-0)  
 JRN 366 - Advertising Account Management 3(3-0)  
 JRN 369 - Advertising and Public Relations Research 3(3-0)  
 JRN 402 - Advanced Media Graphics and Visual Communication 3(3-0)  
 JRN 404 - Law of Mass Communication 3(3-0)  
 JRN 465 - Advertising Copy and Design 3(3-0)  
 JRN 466 - Advertising Campaigns 3(3-0)  
 JRN 467 - Advertising Account Planning 3(3-0)  
 MKT 305 - Buyer Behavior 3(3-0)  
 MKT 315 - Advertising Media 3(3-0)  
 MKT 410 - Advertising Management 3(3-0)  
 PSY 337 - Psychology of Advertising 3(3-0)

**Total: 24 semester hours**

## Disability Studies and Community Inclusion Minor

B.A.; B.A.A.; B.S. degrees

*Advisors: JoDell Heroux (students with last names A-M) and Shay Dawson (students with last names N-Z)*

The minor in Disability Studies and Community Inclusion will enable students to move from sympathetic to empathetic approaches of empowerment and engagement with people that have disabilities from diverse backgrounds and diagnoses. Students interested in this minor will learn to view disability through the lenses of the social and biopsychosocial models of disability as well as to focus on improving community inclusion. The Disability Studies & Community Inclusion minor is designed to complement undergraduate majors in health professions (pre-med, pre-PT, pre-OT), social work, communication disorders, therapeutic recreation, psychology, special education, business, hospitality, journalism and other areas of study.

Students interested in this academic program should contact an advisor in the Department of Recreation, Parks and Leisure Services Administration or the Department of Teacher and Special Education..

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Any undergraduate student admitted to CMU may apply. A 2.5 GPA is required for admission as well as a written statement of interest. A grade of C (2.0) or better in the minor is required for graduation.

#### Required Courses I (12 hours)

RPL 110 - Experience of Disability & Social Marginalization 3(3-0)  
RPL 210 - Introduction to Therapeutic Recreation 3(3-0)  
SPE 210 - History of Disability 3(3-0)  
SPE 370 - Disability and Society 3(3-0)

#### Required Courses II (3 hours)

Select from the following:  
RPL 312 - Disability in Southeast Europe 3(3-0)  
SPE 375 - Disability Studies Capstone 3(3-0)

**Note:** One of these courses must be completed to fulfill the Required Course II requirement; the remaining course may be counted toward the required elective hours.

#### Electives (5-6 hours)

Select from the following:  
ASL 100 - Introduction to the Deaf Community and Deaf Culture 3(3-0)  
CSD 230 - Introduction to Speech, Language, and Hearing Disabilities/Differences 3(3-0)  
DBI 101 - Introduction to Deafblindness and Intervention 3(3-1)  
HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)  
HDF 247 - Introduction to Gerontology 3(3-0)  
RPL 209 - Inclusive Recreation with Diverse Populations 2(2-0)  
RPL 312 - Disability in Southeast Europe 3(3-0)  
RPL 340 - Therapeutic Recreation: Developmental Disabilities 3(3-0)  
RPL 341 - Therapeutic Recreation: Physical Disabilities 3(3-0)  
RPL 342 - Therapeutic Recreation: Behavioral Health 3(3-0)  
RPL 345 - Therapeutic Recreation: Gerontology 3(3-0)  
SPE 375 - Disability Studies Capstone 3(3-0)

**Total: 20-21 semester hours**

## Interdepartmental majors and minors in the College of Business Administration

See Index for page number:

- Business Administration Minor,
- International Business Major,
- Law and Economics Major,
- Purchasing and Supply Management Major.

## Certificate

### Undergraduate Certificate in Applied Forensic Studies

*College of Liberal Arts and Social Sciences*

This 13-15 credit-hour undergraduate certificate is designed for degree-seeking students of any major who are interested in forensic studies. Students will learn specific psychological and anthropological skills used in forensic labs and discuss social factors and biases behind their methods and theories.

Students will gain applied experience through an internship, co-op, or research experience. It is designed to prepare students for entry or advancement in forensic science careers.

Contact the Department of Philosophy, Anthropology, and Religion or the Department of Psychology for more information.

#### Required Courses I (12 hours)

ANT 341 - Forensic Sciences 3(3-0)  
ANT 342 - Principles of Forensic Anthropology 3(3-0)  
PSY 100 - Introduction to Psychology 3(3-0)  
PSY 339 - Law and Forensic Psychology 3(3-0)

#### Required Courses II (1-3 hours)

Select one of the following:  
ANT 498 - Independent Studies In Anthropology 1-12(Spec)  
PSY 490 - Field Placement in Psychology 3(Spec)  
PSY 496 - Directed Research 1-6(Spec)  
PSY 497 - Independent Study 1-4(Spec)

**Total: 13-15 semester hours**



# » College of the Arts and Media

**Jefferson Campbell, D.M.A., Dean**

**Jonathon Russell, M.F.A., Associate Dean**

**129 Moore Hall; 989-774-1885**

**<https://www.cmich.edu/academics/colleges/college-arts-media>**

**Associated Designators:** IPR, MDP, MMD, MTR

## **Introduction**

The College of The Arts and Media is an active cultural center of the University. It consists of two schools (Music and Communication, Journalism and Media), two departments (Art & Design and Theatre & Dance), and two interdisciplinary programs (Music Theatre, and Multimedia Design) with over 140 faculty. Whether you decide to pursue a degree in one of the disciplines or simply enjoy the benefits of University Theatre, the Art Gallery, WMHW/FM, News Central, or university bands and choirs, the College has much to offer to enrich every student's life. With a constant flow of guest speakers and artists-in-residence, the College is a unique place to notice, to ponder, and to mirror the human condition. It is a place to learn to appreciate art and the diverse cultures that have produced it. Participation in musical and theatrical events, dance, broadcasting, newspaper production, and forensics and debating activities is encouraged and available to all students at Central Michigan University.

## **College Mission**

The College of the Arts and Media believes that the Arts & Media are fundamental to the health, well-being and advancement of society and embraces the power of communication in all its forms. Through scholarship and creativity, the College provides opportunities for students and faculty to pursue their passions, enhance their abilities and realize their potential. The College prepares students to be independent, critical thinkers, lifelong learners and successful professionals in a variety of careers through its commitment to a high quality, comprehensive education.

## **Areas of Study**

Each department, school, and interdisciplinary program offers a major and/or minor, many with a variety of concentrations. The primary fields of study within the College are:

- Art & Design
- Advertising and Public Relations
- Communication
- Journalism and Photojournalism
- Media Arts
- Music (Music Education, Performance & Applied Music)
- Theatre and Dance
- Music Theatre
- Multimedia Design

See the Index of this Bulletin for more information on each of the above programs.

## **Programs for Education Degrees**

The School of Music offers majors and minors under the Bachelor of Music Education degree. If you are interested in teacher certification, consult both the specific department in this Bulletin and the sections on teacher certification.

## **Professional Opportunities and Internships**

Majors in the College are encouraged to participate in career-related experiences. These experiences may be gained through department-sponsored activities, university-wide productions, internships, and summer employment. See your major or minor advisor to develop a plan of study that balances your course load with extracurricular activities.

## **Student Organizations**

The College of The Arts and Media supports many student chapters of professional organizations, honor societies, and service clubs such as The National Broadcasting Society/Alpha Epsilon Rho, Public Relations Student Society of America, Society of Professional Journalists, Alpha Psi Omega, Delta Omicron, and the Student Art League. Participation will help you prepare for a career and become better acquainted with other students, faculty, and working professionals. Students are encouraged to contact individual departments for further information.

## Art and Design (ART)

For information, please contact the chairperson, 989-774-3025, 132 Wightman Hall;  
<https://www.cmich.edu/academics/colleges/college-arts-media/departments-schools/art-design>

### Why Study Art?

The study of the visual arts helps students develop their artistic abilities, strengthen their analytic skills, and improve their interpretive capabilities. Art teaches creative problem solving, self-expression, and self-directed learning. Students in art courses are exposed to the rigors of scholarly inquiry, importance of creative endeavors, and necessity of synthesizing knowledge.

### Art at CMU

The Department of Art and Design offers a variety of courses that lead toward degree programs in animation, art history, graphic design and studio areas, as well as experience and development for non-art majors. The department's curriculum builds from a foundational core, enabling students to pursue individual interests and research across a wide spectrum of offerings within the department. Students develop as they are challenged conceptually and critically in the creative practice of art and design. The Department of Art and Design offers degree programs that prepare students for professional art careers and advanced study in the visual arts.

### The Faculty

Rachael Barron-Duncan, Rose Brauner, Larry Burditt, Israel Davis, Jeremy Davis, Scott de Brestian, Brian Elder, Steve Leeper, Clark Most, Johanna Paas, Kris Sanford, David Stairs

## Majors

### Art Major

#### (Concentrations in Animation, Graphic Design, or Studio)

*B.F.A. degree*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This degree program, which requires 78 hours in art, offers art majors a firm foundation in basic courses such as drawing, design, and art history. This foundation not only provides a strong base for all specialized studio areas but also prepares students to qualify for advanced degree programs.

Because Core Courses I comprise a foundation of courses that form the basis for all successive courses in the major, it is expected that students complete ART 106, ART 117, ART 119, and ART 125 before enrolling in any 300+ studio course. It is mandatory that all Art Majors register for and complete four semesters of ART 096. Students should seek advising assistance from the department upon arrival to the university and should select a major advisor in their area of concentration once they have been accepted into their respective programs.

Students must have an overall grade point average of 2.3 for all art courses counted toward the major. Courses taken on a credit/no credit basis, except for ART 096, may not be counted toward fulfillment of requirements for the art major or minor.

#### Animation Concentration Requirements:

Acceptance into the B.F.A. degree program in the Animation Concentration is contingent on a portfolio review. A student may apply for acceptance when they have completed or are currently enrolled in ART 106, ART 125, ART 207; and two of the following courses: ART 220, ART 222, ART 224, ART 308. Students who fail to be accepted are welcome to reapply the following year.

Before enrolling in 400-level animation courses, students must be accepted as an Animation BFA major. In addition to the general curriculum, the candidate for the B.F.A. degree must complete the following requirements:

1. Declare B.F.A. degree with advisor in the Animation concentration.
2. Participate in animation B.F.A. critiques.
3. Exhibit thesis project at the culmination of their final year.
4. Submit a final thesis and other supporting materials to the Department of Art and Design.

#### Graphic Design Concentration Requirements:

Students seeking admission to the Graphic Design Concentration must, upon completion of ART 231, 235 and 349, submit a portfolio; no further Graphic Design Courses may be taken until accepted into the Concentration. Admission is limited. Students who fail to be accepted are welcome to reapply the following year.

In addition to the general curricula, the candidate for the B.F.A. degree must complete the following requirements:

1. Declare B.F.A. degree with advisor in the Graphic Design concentration.
2. Exhibit a cohesive thesis body of creative work and fulfill all responsibilities that are included in the exhibition.
3. Submit a final portfolio to the Art Department including a resume, artist's statement, visual documentation of thesis work, visual documentation list, and other supporting materials.

#### Studio Concentration Requirements:

Acceptance into the B.F.A. degree program in the Studio Concentration may be applied for when the student has completed or is currently enrolled in ART 106, 117, 119, 125; two courses in art history; and three studio courses.

Students whose applications fail to be accepted to the B.F.A. program are welcome to reapply the following semester.

In addition to the general curricula, the candidate for the B.F.A. degree must complete the following requirements:

1. Declare B.F.A. degree with advisor in student's area of concentration. This professor serves as the student's Thesis Advisor.
2. Participate in faculty critiques for three consecutive semesters before graduation. The B.F.A. Committee will schedule the student's faculty critiques.
3. Exhibit a cohesive thesis body of creative work and fulfill all responsibilities that are included in the exhibition.
4. Conduct a public artist's talk in support of thesis exhibition work.
5. Submit a final portfolio to the Art Department including a resume, artist's statement, visual documentation of thesis work, visual documentation list, and any other supporting materials.

**Core Courses I (12 hours)***Foundations*

- ART 096 - Art Event Attendance (0-0)
- ART 106 - Introduction to Drawing 3(0-6)
- ART 117 - Introduction to Contemporary Issues in Art 3(3-0)
- ART 119 - Design Foundations 3(0-6)
- ART 125 - Digital Design 3(0-6)

**Core Courses II (6 hours)**

- ART 283 - Introduction to Western Art, Part I 3(3-0)
- ART 285 - Introduction to Western Art, Part II 3(3-0)

**Core Courses III (12 hours)**

Select from the following:

- ART 202 - Introduction to Digital Fabrication 3(0-6)
- ART 207 - Introduction to Animation: Traditional Media 3(0-6)
- ART 214 - Introduction to Ceramics 3(2-3)
- ART 217 - Introduction to Figure Drawing 3(0-6)
- ART 233 - Introduction to Painting 3(0-6)
- ART 241 - Introduction to Photography 3(0-6)
- ART 251 - Introduction to Printmaking 3(0-6)
- ART 261 - Introduction to Sculpture 3(0-6)

**Core Courses IV (12 hours)**

Select from the following:

- ART 277 - History of Animation 3(3-0)
- ART 287 - Introduction to Non-Western Art 3(3-0)
- ART 312 - Special Studies in Art History 3-9(3-0)
- ART 317 - Digital Art History and Archaeology 3(2-3)
- ART 319 - The Methods of Art History 3(3-0)
- ART 341 - History of Photography 3(3-0)
- ART 363 - History of Design: 1750-2010 3(3-0)
- ART 380 - Greek Art and Architecture 3(3-0)
- ART 381 - Early Christian and Byzantine Art 3(3-0)
- ART 382/WGS 382 - Gender and Art 3(3-0)
- ART 383 - Modern Architecture 3(3-0)
- ART 385 - European Modernism 3(3-0)
- ART 386 - American Art 3(3-0)
- ART 387 - Baroque Art 3(3-0)
- ART 388 - Eighteenth-Century Art 3(3-0)
- ART 389 - Art of the Ancient Near East and Egypt 3(3-0)
- ART 391 - African Art 3(3-0)
- ART 480 - Roman Art and Architecture 3(3-0)
- ART 481 - Western Medieval Art 3(3-0)
- ART 482 - Italian Renaissance Art 3(3-0)
- ART 483 - Nineteenth Century European Art 3(3-0)
- ART 485 - Art After 1945 3(3-0)
- ART 486 - Independent Study in Art History 1-6(Spec)
- ART 488 - Northern Renaissance Art 3(3-0)
- ART 489 - Islamic Art 3(3-0)
- ART 495 - Art History Study Abroad 1-9(Spec)
- ART 580 - Seminar in Ancient/Medieval Art History 3-6(3-0)
- ART 581 - Seminar in Early Modern Art History 3-6(3-0)
- ART 582 - Seminar in Modern and Contemporary Art History 3-6(3-0)
- ART 586 - Special Topics Seminar in Art History 3-9(3-0)

You may choose to take ART 341, ART 363, and ART 277, but may count only one of these courses toward the Core IV requirement.

**Core Courses V (3 hours)**

- Students in the Animation Concentration are required to take ART 477; Studio Concentration students are required to take ART 471; Graphic Design Concentration students are required to take ART 472: ART 471 - BFA Studio Art Exhibition 3(3-0)
- ART 472 - Graphic Design Capstone Experience 3(0-6)
- ART 477 - Animation Portfolio and Professional Practices 3(0-6)

**Concentrations**

Select one of the following:

**Animation Concentration:****Required Courses I (6 hours)**

Three credits of each:

- ART 222 - 2D Digital Animation 3(0-6)
- ART 308 - Storyboarding for Digital Media 3-6(Spec)

**Required Courses II (12 hours)**

- ART 420 - Animation Studio I: Micro-Short Production 3(0-6)
- ART 422 - Animation Studio II: Short Form Production 3(0-6)
- ART 520 - Animation Sr. Project I: Development and Pre-production 3-6(Spec)
- ART 522 - Animation Sr. Project II: Production and Post 3-6(Spec)

**Electives (15 hours)**

Select from the following:

- ART 220 - Animation Drawing I 3(0-6)
- ART 224 - 3D Computer Animation I: Foundations 3(0-6)
- ART 309 - Concept Development: Characters and Environments z 3-6(Spec)
- ART 320 - Animation Drawing II 3-6(Spec)
- ART 323 - Digital Sculpture 3-6(Spec)
- ART 324 - 3D Computer Animation II: Characters 3-6(Spec)
- ART 325 - 3D Computer Animation III: Environments 3-6(Spec)
- ART 327 - Alternative Strategies in Animation 3-6(Spec)
- ART 328 - Stop Motion Animation 3-6(Spec)
- ART 407 - Character Performance for Animators 3-9(Spec)
- ART 408 - Independent Animation Studio 3-9(Spec)
- ART 409 - Advanced Production Studio 3-9(Spec)

**Total: 78 semester hours**

**Graphic Design Concentration:****Electives I (30 hours)**

Select hours from the following:

- ART 231 - Introduction to Graphic Design 3(0-6)
- ART 235 - Logo and Identity Design 3(0-6)
- ART 335 - Design Bureau 3(0-6)
- ART 349 - Typography 3(0-6)
- ART 358 - Web Design I 3(0-6)
- ART 363 - History of Design: 1750-2010 3(3-0)
- ART 366 - Contemporary Design Issues 3(3-0)
- ART 435 - Professional Design Practices 3(0-6)
- ART 438 - Motion Graphics 3(0-6)
- ART 449 - Advanced Typography 3(0-6)
- ART 458 - Web Design II 3(0-6)
- ART 535 - Emerging Media in Graphic Design 3(0-6)

**Electives II (3 hours)**

Select any ART course except ART 114 or 126.

**Total: 78 semester hours**

**Studio Concentration:****Electives I (27 hours)**

Select from the following:

- ART 222 - 2D Digital Animation 3(0-6)
- ART 258 - Everyday Web Design 3(0-6)
- ART 308 - Storyboarding for Digital Media 3-6(Spec)
- ART 314 - Ceramics Studio: Wheel-throwing 3(0-6)
- ART 334 - Watercolor Painting 3(0-6)
- ART 342 - Alternative Photographic Processes 3-6(Spec)
- ART 351 - Screen Printing 3(0-6)
- ART 360 - Figure and Portrait Sculpture 3-6(Spec)
- ART 406 - Drawing Studio 3-9(Spec)
- ART 414 - Ceramics Studio 3-9(Spec)
- ART 417 - Figure Drawing Studio 3-9(Spec)
- ART 433 - Painting Studio 3-9(Spec)
- ART 441 - Photography Lighting Studio 3(0-6)
- ART 451 - Printmaking Studio 3-9(Spec)
- ART 463 - Sculpture Studio 3-9(Spec)
- ART 584 - Drawing in Florence 3(Spec)

**Electives II (3 hours)**

Select from the following:

- ART 506 - Advanced Drawing Studio 1-12(Spec)
- ART 514 - Advanced Ceramics Studio 1-12(Spec)
- ART 517 - Advanced Figure Drawing Studio 1-12(Spec)
- ART 533 - Advanced Painting Studio 1-12(Spec)
- ART 541 - Advanced Photography Studio 1-12(Spec)
- ART 551 - Advanced Printmaking Studio 1-12(Spec)
- ART 561 - Advanced Sculpture Studio 1-12(Spec)

**Electives III (3 hours)**

Select any ART course except ART 114 or 126.

**Total: 78 semester hours**

## Art Major

### (Concentrations in Animation or Studio)

*B.A.A. degree*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This art major consists of 57 semester hours arranged in consultation with a department advisor. Students must have an overall grade point average of 2.3 for all art courses counted toward the major. Because Core Courses I comprise a foundation of courses that form the basis for all successive courses in the major, it is expected that students complete ART 106, 117, 119, and 125 before enrolling in any 300+ studio course. It is mandatory that all Art Majors register for and complete four semesters of ART 096. Students should seek advising assistance from the department upon arrival at the university and should select a major advisor.

As part of ART 125, a digital portfolio will be created and reviewed by faculty for feedback.

Courses taken on a credit/no credit basis, except for ART 096, may not be counted toward fulfillment of requirements for the art major or minor.

**Core Courses I (12 hours)**

- ART 096 - Art Event Attendance (0-0)
- ART 106 - Introduction to Drawing 3(0-6)
- ART 117 - Introduction to Contemporary Issues in Art 3(3-0)
- ART 119 - Design Foundations 3(0-6)
- ART 125 - Digital Design 3(0-6)

**Core Courses II (6 hours)**

- ART 283 - Introduction to Western Art, Part I 3(3-0)
- ART 285 - Introduction to Western Art, Part II 3(3-0)

**Core Courses III (6 hours)**

Select from the following:

- ART 277 - History of Animation 3(3-0)
- ART 287 - Introduction to Non-Western Art 3(3-0)
- ART 312 - Special Studies in Art History 3-9(3-0)
- ART 317 - Digital Art History and Archaeology 3(2-3)
- ART 319 - The Methods of Art History 3(3-0)
- ART 341 - History of Photography 3(3-0)
- ART 363 - History of Design: 1750-2010 3(3-0)
- ART 380 - Greek Art and Architecture 3(3-0)
- ART 381 - Early Christian and Byzantine Art 3(3-0)
- ART 382/WGS 382 - Gender and Art 3(3-0)
- ART 383 - Modern Architecture 3(3-0)
- ART 385 - European Modernism 3(3-0)
- ART 386 - American Art 3(3-0)
- ART 387 - Baroque Art 3(3-0)
- ART 388 - Eighteenth-Century Art 3(3-0)
- ART 389 - Art of the Ancient Near East and Egypt 3(3-0)
- ART 391 - African Art 3(3-0)
- ART 480 - Roman Art and Architecture 3(3-0)
- ART 481 - Western Medieval Art 3(3-0)
- ART 482 - Italian Renaissance Art 3(3-0)
- ART 483 - Nineteenth Century European Art 3(3-0)

ART 485 - Art After 1945 3(3-0)

ART 486 - Independent Study in Art History 1-6(Spec)

ART 488 - Northern Renaissance Art 3(3-0)

ART 489 - Islamic Art 3(3-0)

ART 495 - Art History Study Abroad 1-9(Spec)

ART 580 - Seminar in Ancient/Medieval Art History 3-6(3-0)

ART 581 - Seminar in Early Modern Art History 3-6(3-0)

ART 582 - Seminar in Modern and Contemporary Art History 3-6(3-0)

ART 586 - Special Topics Seminar in Art History 3-9(3-0)

**Note:** You may choose to take ART 341, ART 363, and ART 277, but may only count one of these courses toward the Core III requirement.

**Core Courses IV (9 hours)**

Select from the following:

- ART 202 - Introduction to Digital Fabrication 3(0-6)
- ART 207 - Introduction to Animation: Traditional Media 3(0-6)
- ART 214 - Introduction to Ceramics 3(2-3)
- ART 217 - Introduction to Figure Drawing 3(0-6)
- ART 233 - Introduction to Painting 3(0-6)
- ART 241 - Introduction to Photography 3(0-6)
- ART 251 - Introduction to Printmaking 3(0-6)
- ART 258 - Everyday Web Design 3(0-6)
- ART 261 - Introduction to Sculpture 3(0-6)

**Core Courses V (3 hours)**

Animation Concentration students are required to take ART 399; Studio Concentration students are required to take ART 499:

- ART 399 - BAA Animation Capstone 3(3-0)
- ART 499 - BAA Studio Art Senior Seminar 3(3-0)

**Concentrations**

Select one of the following concentrations:

**Animation Concentration****Electives I (6 hours)**

3 credits of each:

- ART 222 - 2D Digital Animation 3(0-6)
- ART 308 - Storyboarding for Digital Media 3-6(Spec)

**Electives II (12 hours)**

Select 12 hours from the following:

- ART 220 - Animation Drawing I 3(0-6)
- ART 224 - 3D Computer Animation I: Foundations 3(0-6)
- ART 309 - Concept Development: Characters and Environments 3-6(Spec)
- ART 320 - Animation Drawing II 3-6(Spec)
- ART 323 - Digital Sculpture 3-6(Spec)
- ART 324 - 3D Computer Animation II: Characters 3-6(Spec)
- ART 325 - 3D Computer Animation III: Environments 3-6(Spec)
- ART 327 - Alternative Strategies in Animation 3-6(Spec)
- ART 328 - Stop Motion Animation 3-6(Spec)

**Electives III (3 hours)**

Select any ART courses except ART 114 or 126.

**Total: 57 semester hours**

**Studio Concentration****Electives I (18 hours)**

Select 18 hours from the following:

- ART 222 - 2D Digital Animation 3(0-6)
- ART 308 - Storyboarding for Digital Media 3-6(Spec)
- ART 314 - Ceramics Studio: Wheel-throwing 3(0-6)
- ART 334 - Watercolor Painting 3(0-6)
- ART 342 - Alternative Photographic Processes 3-6(Spec)
- ART 351 - Screen Printing 3(0-6)
- ART 360 - Figure and Portrait Sculpture 3-6(Spec)
- ART 406 - Drawing Studio 3-9(Spec)
- ART 414 - Ceramics Studio 3-9(Spec)
- ART 417 - Figure Drawing Studio 3-9(Spec)
- ART 433 - Painting Studio 3-9(Spec)

(continued)



ART 441 - Photography Lighting Studio 3(0-6)  
 ART 451 - Printmaking Studio 3-9(Spec)  
 ART 463 - Sculpture Studio 3-9(Spec)  
 ART 506 - Advanced Drawing Studio 1-12(Spec)  
 ART 514 - Advanced Ceramics Studio 1-12(Spec)  
 ART 517 - Advanced Figure Drawing Studio 1-12(Spec)  
 ART 533 - Advanced Painting Studio 1-12(Spec)  
 ART 541 - Advanced Photography Studio 1-12(Spec)  
 ART 551 - Advanced Printmaking Studio 1-12(Spec)  
 ART 561 - Advanced Sculpture Studio 1-12(Spec)  
 ART 584 - Drawing in Florence 3(Spec)

**Electives II (3 hours)**

Select any ART courses except ART 114 or 126.

**Total: 57 semester hours**

**Art History Major**

*B.A. degree*

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

This degree program, which requires 40 credit hours, offers students a firm foundation in the history of art and its methodologies. This foundation not only provides a strong basis for all specialized area studies, but also prepares students for advanced degree programs. Students planning or considering a major or minor in Art History are urged to consult with a faculty advisor as early as possible in their college careers.

Students must have an overall grade point average of 2.3 for all art courses counted toward the major. It is mandatory that all Art History Majors register for and complete four semesters of ART 096.

Courses taken on a credit/no credit basis, except for ART 096, may not be counted toward fulfillment of requirements for the Art History major or minor.

Art History majors are encouraged to participate in the CMU Semester Abroad program.

Art History majors and minors planning to do graduate work are strongly urged to take the Graduate Record Examination (GRE) early in their senior year. This examination is generally required for admission to graduate schools.

ART 319 should be taken in either the second or third semester in the program, after completing 36 credit hours, including 6 hours of Art History courses. This course acts as a mid-point, preparing students for 300+ level courses. All 500-level courses have ART 319 as a prerequisite.

Students should enroll in ART 492 in the fall of their final year and ART 589 the following semester, where they will conduct independent research and produce a senior thesis. ART 589 requires one 500+ level Art History course as a prerequisite.

**Core Courses I (9 hours)**

ART 096 - Art Event Attendance (0-0)  
 ART 283 - Introduction to Western Art, Part I 3(3-0)  
 ART 285 - Introduction to Western Art, Part II 3(3-0)  
 ART 287 - Introduction to Non-Western Art 3(3-0)

**Core Courses II (7 hours)**

ART 319 - The Methods of Art History 3(3-0)  
 ART 492 - Art History Professional Development 1(1-0)  
 ART 589 - Research Seminar in Art History 3(3-0)

**Core Courses III (9 hours)**

Select one course each from Groups 1, 2, and 3:

**Group 1**

ART 380 - Greek Art and Architecture 3(3-0)  
 ART 381 - Early Christian and Byzantine Art 3(3-0)  
 ART 389 - Art of the Ancient Near East and Egypt 3(3-0)  
 ART 480 - Roman Art and Architecture 3(3-0)  
 ART 481 - Western Medieval Art 3(3-0)

ART 580 - Seminar in Ancient/Medieval Art History 3-6(3-0)

**Group 2**

ART 387 - Baroque Art 3(3-0)  
 ART 388 - Eighteenth-Century Art 3(3-0)  
 ART 482 - Italian Renaissance Art 3(3-0)  
 ART 488 - Northern Renaissance Art 3(3-0)  
 ART 581 - Seminar in Early Modern Art History 3-6(3-0)

**Group 3**

ART 383 - Modern Architecture 3(3-0)  
 ART 385 - European Modernism 3(3-0)  
 ART 386 - American Art 3(3-0)  
 ART 483 - Nineteenth Century European Art 3(3-0)  
 ART 485 - Art After 1945 3(3-0)  
 ART 582 - Seminar in Modern and Contemporary Art History 3-6(3-0)

**Group 4**

ART 277 - History of Animation 3(3-0)  
 ART 312 - Special Studies in Art History 3-9(3-0)  
 ART 317 - Digital Art History and Archaeology 3(2-3)  
 ART 341 - History of Photography 3(3-0)  
 ART 363 - History of Design: 1750-2010 3(3-0)  
 ART 382/WGS 382 - Gender and Art 3(3-0)  
 ART 391 - African Art 3(3-0)  
 ART 486 - Independent Study in Art History 1-6(Spec)  
 ART 489 - Islamic Art 3(3-0)  
 ART 493 - Art History Internship 1-6(Spec)  
 ART 495 - Art History Study Abroad 1-9(Spec)  
 ART 586 - Special Topics Seminar in Art History 3-9(3-0)

**Electives I (9 hours)**

Select three (3) courses from Groups 1-4.

**Electives II (3 hours)**

Select one 500-level course not previously taken from Groups 1-4.

**Electives III (3 hours)**

Select one studio art course.

**Total: 40 semester hours**

## Minors

### Art History Minor

*B.A. degree, B.A.A. degree, B.F.A. degree, or B.S. degree*

A minor in art history consists of at least 21 hours in art history, arranged in consultation with a departmental advisor.

#### Required Courses (6 hours)

ART 283 - Introduction to Western Art, Part I 3(3-0)

ART 285 - Introduction to Western Art, Part II 3(3-0)

#### Electives (15 hours)

Select from the following:

ART 277 - History of Animation 3(3-0)

ART 287 - Introduction to Non-Western Art 3(3-0)

ART 312 - Special Studies in Art History 3-9(3-0)

ART 317 - Digital Art History and Archaeology 3(2-3)

ART 319 - The Methods of Art History 3(3-0)

ART 341 - History of Photography 3(3-0)

ART 363 - History of Design: 1750-2010 3(3-0)

ART 380 - Greek Art and Architecture 3(3-0)

ART 381 - Early Christian and Byzantine Art 3(3-0)

ART 382/WGS 382 - Gender and Art 3(3-0)

ART 383 - Modern Architecture 3(3-0)

ART 385 - European Modernism 3(3-0)

ART 386 - American Art 3(3-0)

ART 387 - Baroque Art 3(3-0)

ART 388 - Eighteenth-Century Art 3(3-0)

ART 389 - Art of the Ancient Near East and Egypt 3(3-0)

ART 391 - African Art 3(3-0)

ART 480 - Roman Art and Architecture 3(3-0)

ART 481 - Western Medieval Art 3(3-0)

ART 482 - Italian Renaissance Art 3(3-0)

ART 483 - Nineteenth Century European Art 3(3-0)

ART 485 - Art After 1945 3(3-0)

ART 486 - Independent Study in Art History 1-6(Spec)

ART 488 - Northern Renaissance Art 3(3-0)

ART 489 - Islamic Art 3(3-0)

ART 495 - Art History Study Abroad 1-9(Spec)

ART 580 - Seminar in Ancient/Medieval Art History 3-6(3-0)

ART 581 - Seminar in Early Modern Art History 3-6(3-0)

ART 582 - Seminar in Modern and Contemporary Art History 3-6(3-0)

ART 586 - Special Topics Seminar in Art History 3-9(3-0)

**Note:** You may choose to take ART 341, 363, and ART 277, but may count only one of these courses toward the minor.

**Total: 21 semester hours**

### Art Minor

*B.A. degree, B.A.A. degree, B.F.A. degree, or B.S. degree*

This minor must be arranged in consultation with a departmental advisor.

#### Required Courses (9 hours)

ART 106 - Introduction to Drawing 3(0-6)

ART 119 - Design Foundations 3(0-6)

ART 285 - Introduction to Western Art, Part II 3(3-0)

#### Electives I (6 hours)

Select two of the following:

ART 202 - Introduction to Digital Fabrication 3(0-6)

ART 207 - Introduction to Animation: Traditional Media 3(0-6)

ART 214 - Introduction to Ceramics 3(2-3)

ART 217 - Introduction to Figure Drawing 3(0-6)

ART 231 - Introduction to Graphic Design 3(0-6)

ART 233 - Introduction to Painting 3(0-6)

ART 241 - Introduction to Photography 3(0-6)

ART 251 - Introduction to Printmaking 3(0-6)

ART 261 - Introduction to Sculpture 3(0-6)

#### Electives II (6 hours)

Select any ART courses except ART 114 or ART 126.

**Total: 21 semester hours**

### Multimedia Design Minor

This is an interdisciplinary minor. Please check the index for the page number.

## **Communication, Journalism, and Media** (BCA, COM, IPR, JRN)

For information, please contact the SCJM office, 989-774-3177, Moore Hall 333; <https://www.scjm.cmich.edu>

### **School of Communication, Journalism, and Media**

The disciplines in the School of Communication, Journalism, and Media provide you with the opportunity to study a broad range of communication, including interpersonal communication and debate, professional strategic communications, media arts, and social media. The four areas in the School, Advertising and Public Relations, Communication, Journalism, and Media Arts, offer you hands-on opportunities through co-curricular activities, student organizations, and internships that will provide you with the essential skills to be an effective twenty-first century communicator.

### **Why Study Strategic Communication?**

Strategic Communication is the study of communication strategies, principles, tactics, and initiatives that further the goals of an organization. Students learn how to use social and digital media to promote and advance the public image of businesses and organizations. Student can pick from majors in Advertising, Integrative Public Relations, or Journalism with a Public Relations Concentration.

Students interested in one of these programs are advised to contact a College of the Arts and Media or Strategic Communication advisor as early as possible and meet with that advisor each semester before registering for classes. Majors and minors are also expected to be involved each semester in co-curricular activities: the Public Relations Student Society of America, PR Central, and the American Advertising Federation, also known as Ad Club.

Employers expect Advertising, Integrative Public Relations, and Public Relations graduates to have completed at least one internship which is an indicator that an applicant has the attitude and skills necessary to be successful in the workplace. The School of Communication, Journalism, and Media Internship Coordinator will provide input on finding internships that match your career interests and allow you to build a portfolio of your work.

### **Advertising at CMU**

Our advertising program combines theoretical, conceptual, and practical classes with hands-on experiences. You will have opportunities to learn about advertising research, messaging, and creative strategies, writing advertising copy and design, media planning and integrated marketing communication.

CMU's Advertising program is accredited by the Accrediting Council for Education in Journalism and Mass Communications, a distinction held by only one other Michigan university.

### **Integrative Public Relations and Public Relations Concentration at CMU**

As part of our Integrative Public Relations and Public Relations concentration programs you will build the skills and talents to earn and maintain public confidence in organizations of any size. Whether it's a multinational manufacturer, a hospital, or a local charity, earning and maintaining public confidence is the role of the public relations practitioner. Both majors will prepare you to develop the skills to be the voice of an organization and establish a dialogue with different audiences. You will learn to do research, craft media releases, develop social media strategies and content, plan events, create and implement communication plans to advance the company, and address social problems through the strategic use of organizational resources.

CMU's Public Relations Concentration program is accredited by the Accrediting Council for Education in Journalism and Mass Communications, a distinction held by only one other Michigan university.

The Integrative Public Relations major is an interdisciplinary major that includes courses from the School of Communication, Journalism, and Media; Business; Art; and others.

### **Why Study Communication?**

The ability to communicate well, crucial to all of our activities, is developed through informed and careful study in the discipline of communication. Among the many areas of study are: public speaking, intercultural communication, business and organizational communication, interpersonal and group communication, debate and persuasion.

### **Communication at CMU**

Communication at CMU addresses the complex nature of oral communication in its various forms.

The professional and academic goals for Communication are the following: (1) to generate an appreciation for and an ability to utilize communication theory appropriate to the students' vocational aspirations and societal needs; (2) to encourage the development of communication skills that help students build and maintain a sense of self-worth, understanding, and self-confidence; (3) to explore the integration of communication theory and skills with other social-science disciplines; (4) to sensitize students to the variety of perspectives and perceptions of people from different backgrounds and cultures and show the role of communication in creating understanding; (5) to assist students in developing communication competencies that enhance self-directed learning and problem-solving ability; (6) to provide service for the public good; (7) to provide students with an opportunity to demonstrate communication skills in applied communication settings; (8) to provide quality education to update and refine the students' knowledge in accordance with their developing needs; and (9) to contribute to the general advancement of knowledge by stimulating and supporting research efforts.

The Communication Area offers a major and minor in Communication as well as an undergraduate certificate in Professional Communication and Presentation Skills.

## Why Study Journalism?

Journalism and mass communications transmit and interpret culture and bind society together, making them among the most vital forces in the maintenance of any society and fundamental to democratic government and a free society. The mission of the Journalism Area is to foster in its students the skills, values, and practices associated with professional journalism; to further their understanding of how those attributes intersect with local, national and global citizenship; to demand critical thinking; to challenge them to be the creators of and leaders in a constantly changing media environment, and to fully engage with diverse audiences.

CMU Journalism graduates find jobs in news reporting, magazine and feature writing, web editing, and photojournalism. Journalism education also benefits students going into law, politics, consulting, health education, business, and environmental and sports studies and many other fields that require information gathering, precision writing and visual communication skills.

## Journalism at CMU

CMU's Journalism program is accredited by the Accrediting Council for Education in Journalism and Mass Communications, a distinction held by only one other Michigan university. Our program balances classroom theory with service learning and other structured hands-on experiences that help students develop the skills required for entry-level positions in the media, as well as related professions and for entrepreneurial media-related careers.

Students may select a major in journalism or photojournalism. All students enroll in a common set of courses that emphasizes information gathering, processing and writing, visual communication skills and the philosophical framework of the profession, including the role of mass communications in contemporary society, the role of media in racial and global diversity and the legal context in which the industry operates.

We also offer a journalism minor and an interdisciplinary minor, Multimedia Design. See the Index for the page number for these programs.

Students interested in one of these programs are advised to contact a College of the Arts and Media or Journalism Area advisor as early as possible and meet with that advisor each semester before registering for classes. Majors and minors are also expected to be involved each semester in co-curricular activities: CMLife, Grand Central Magazine, the Society of Professional Journalists, and the Central Press Photographers Association.

Employers expect journalism graduates to have had at least one internship, an indicator that an applicant has the attitude and skills necessary to be successful in the workplace. The School of Communication, Journalism, and Media Internship Coordinator will provide input on finding internships that match your career interests and allow you to build a portfolio of your work.

## CMU's Journalistic Integrity Policy

The Journalism Area holds truth, accuracy and fairness as the fundamental principles of journalism education and media professions. Each faculty member in the area is responsible for instilling those values in our students as the credibility of media professionals depends on trustworthiness and integrity. To maintain the high standards this program has long established and the strong reputation it has long enjoyed among the professionals and alumni throughout the state, the country and the world, the department reserves the right to remove a student from its program if the student is found to have violated these standards. Violations may include, but are not limited to, fabricating assignments, plagiarism, misrepresentation to faculty, clients, sources or others during the performance of an assignment or project, or willfully violating the codes of ethics as established by industry standards, such as those promulgated by the Society of Professional Journalists and the National Press Photographers Association.

## Why Study Media Arts?

Media surrounds us; on the radio, on television, on the internet, on our smart phones and devices, and other public spaces. Be a part of creating and managing this media by joining one of the most comprehensive media programs in the country. The Media Arts Area offers a flexible major or minor in Media Arts that allows you to explore several areas including audio and video production, broadcast news, sports broadcasting, media leadership and entrepreneurship, film and media studies, media writing, and media performance. Take your media project ideas and create productions for the world to see. A degree in media arts can prepare you for the exciting and creative world of media. From the moment you walk on campus, you can develop skills in one of our five student media activities. Don't dream of the story you want to tell, make it happen.

## Media Arts at CMU

Students seeking to major or minor in Broadcast and Cinematic Arts should meet with a Media Arts faculty advisor to select the best elective courses to meet their career goals. You will learn media skills in the classroom that you can apply in hands-on practical experiences in our co-curricular activities. Create media content with other students like you who want to make an impact through producing and managing audio and video content for radio, television, news, sports, YouTube, TikTok, or podcasts. Develop the skills and put them into practice through experiential learning from your first day on campus. It is expected that each Broadcast and Cinematic Arts major and minor will be involved every semester in one or more of the School's co-curricular activities. These include WMHW-FM (Mountain 91.5 & 101.1 The Beat), Moore Hall Television (MHTV), News Central, Moore Media Records and CMU Film Society. These activities provide students with practical media experience that cannot be replicated in the classroom. Students are also encouraged to participate in CMU chapters of the National Broadcasting Society.



## Why Study Cinema Arts?

Content creation is king. A major in cinema arts provides experience in all areas of film production, from scriptwriting to production to post-production. From the big screen to the small screen, through cinematic and commercial projects, you'll acquire the essential skills to tell your story. Graduate with a strong portfolio ready to pursue careers in film, video, screenwriting and more.

## Cinema Arts at CMU

Acquire an understanding of all aspects of film in Michigan's only BFA program in cinema arts. Shape rough ideas into well-crafted scripts. Learn about the various design and aesthetic principles of film. And craft your own film production with access to high-quality film equipment and software. You'll graduate with critical hands-on experience and a solid digital portfolio to help you pursue careers in film, video, screenwriting and more.

Our passionate and award-winning faculty will mentor you through an exciting curriculum that provides a crucial balance of art and design, technology and theory. Alongside peers just as passionate as you are about watching and making good films, you'll take courses in design, scriptwriting, audio and video production, film critique and analysis, and have the opportunity to focus in on areas where your curiosity leads. Your film project will come to life applying the skills and knowledge acquired in the classroom and studio spaces. You'll have the time, resources, and collaboration opportunities to successfully navigate the production process, and complete and display your film project. Students' films have been exhibited at the Central Michigan International Film Festival, Traverse City Film Festival, Boston Sci Fi Festival, Hell's Half Mile Film & Music Festival and more. Beyond the classroom you'll have access to internship opportunities with broadcast and television studios, film and media companies, digital web agencies and more. Take advantage of our strong Alumni network reaching all areas of the film and television industry. You can also join CMU's Animation Club, Film Society, and Moore Hall Television, an organization for passionate cinephiles committed to promoting diversity, educational and cultural awareness through film.

## The Faculty

Will Anderson, Kathy Backus, Sean Baker, Jim Bollella, Lori F. Brost, Rick Buerkel, Mario Caballero, Kevin Campbell, Elizabeth Carlson, Steven Coon, Kevin Corbett, Trevor Diehl, Elina Erzikova, Katie Hadar, Edward Hinck, Jinhee Lee, Eric Limarenko, Alysa Lucas, Michael Marn, Carol McGinnis, Joseph Packer, Michael Papa, Wendy Papa, Heather Polinsky (Director), Mike Potter, Richard Ren, Amy Sindik, Trey Stohman, Alice A. Tait, Kirsten Weber, Patty Williamson, Lesley Withers, James Wojcik, Jiafei Yin, Zulfia Zaher

## Strategic Communication

### Advertising Major

*B.A. degree, B.A.A. degree, or B.S. degree*

An Advertising Major requires 45 hours of journalism and marketing coursework.

The Strategic Communication area of the School of Communication, Journalism, and Media requires that ALL graduating seniors take an exit exam prior to graduation as part of the department's assessment efforts.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students majoring in Advertising must meet the criteria established by the Accrediting Council on Education in Journalism and Mass Communications. That means that they must take liberal arts and sciences courses in compliance with CMU's University Program requirements, listed under the University Program for the B.A., B.A.A., or B.S. degree. A grade of C or better is required in each course counted toward the Advertising major and an overall grade point average of 2.5 for all journalism courses counted toward the major.

The last 18 hours of journalism and marketing course work leading to an advertising major should be taken within the Strategic Communication area of the School of Communication, Journalism and Media at CMU. No more than 6 credits of journalism internship can be applied toward the major.

Each advertising major must consult with a Strategic Communication faculty advisor prior to registering for courses each semester to ensure orderly progress toward meeting these requirements.

#### Required Courses I (3 hours)

Select one of the following:  
JRN 101 - Media and Society 3(3-0)  
JRN 105 - Social Media in Society 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:  
JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)  
JRN 380 - Racial and Cultural Diversity: Mass Media's Role 3(3-0)

#### Required Courses III (30 hours)

JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)  
JRN 360 - Advertising Principles 3(3-0)  
JRN 361 - Writing for Advertising 3(3-0)  
JRN 365 - Advertising Media 3(3-0)  
JRN 369 - Advertising and Public Relations Research 3(3-0)  
JRN 375 - Digital and Social Media Analytics 3(3-0)  
JRN 404 - Law of Mass Communication 3(3-0)  
JRN 465 - Advertising Copy and Design 3(3-0)  
JRN 466 - Advertising Campaigns 3(3-0)  
JRN 569 - Advertising Internship 1-4(Spec)

#### Required Courses IV (9 hours)

Select three of the following:  
JRN 250 - Social Media: Managing the Message 3(3-0)  
JRN 339 - Social Media: Reputation, Image and Interaction 3(3-0)  
JRN 353 - Foundations of Strategic Public Relations 3(3-0)  
JRN 366 - Advertising Account Management 3(3-0)  
JRN 402 - Advanced Media Graphics and Visual Communication 3(3-0)  
JRN 467 - Advertising Account Planning 3(3-0)  
MKT 300 - Introduction to Marketing 3(3-0)  
PSY 337 - Psychology of Advertising 3(3-0)

**Total: 45 semester hours**

## Integrative Public Relations Major

*B.A. degree, B.A.A. degree, or B.S. degree*

Integrative Public Relations is an interdisciplinary major grounded in the disciplines concerned with the practice of public relations. Students are strongly encouraged to work closely with their academic advisor throughout their academic careers.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

In order to declare a major in Integrative Public Relations, a student must first complete IPR 101 with a grade of C or higher.

#### Grade Point Average:

1. IPR majors are required to earn a minimum of a C in all required courses in the major.
2. A minimum 2.5 GPA in the major is required.

#### Internship Requirements:

1. To complete the program, IPR majors must satisfactorily complete a 6 credit hour internship with a grade of C or higher.
2. Any student enrolling in internship hours must have completed all of the required courses except for 500 level courses, earned a C or higher in required courses taken in the major and have attained junior/senior status.

### Required Courses I (37 hours)

BCA 311WI - Electronic Media Copywriting 3(3-0)  
 BCA 512 - Electronic Media Promotion 3(3-0)  
 COM 511 - Crisis Communication 3(3-0)  
 IPR 101 - Foundations of Integrative Public Relations 1(1-0)  
 IPR 555 - Public Relations Internship 3-6(Spec)  
 JRN 202WI - Writing for the Mass Media 3(3-0)  
 JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)  
 JRN 350 - Public Relations Principles and Practices 3(3-0)  
 JRN 369 - Advertising and Public Relations Research 3(3-0)  
 JRN 450WI - Public Relations Writing 3(3-0)  
 JRN 551WI - Case Studies in Public Relations 3(3-0)  
 JRN 556 - Public Relations Seminar 3(3-0)

### Required Courses II (3 hours)

Select from the following:

COM 264 - Communicating in Workplaces 3(3-0)  
 COM 365 - Persuasion and Social Influence 3(3-0)

### Electives I (6 hours)

Select hours from Communication:

COM 195 - Intercultural Communication 3(3-0)  
 COM 352WI - Communication and Social Influence 3(3-0)  
 COM 353 - Small Group Communication 3(3-0)  
 COM 357 - Public Speaking 3(3-0)  
 COM 363 - Principles and Types of Interviewing 3(3-0)  
 COM 560 - Communication and Social/Organizational Change 3(3-0)  
 COM 561 - Communication in Conflict Management 3(3-0)

**Note:** COM 357 fulfills the oral competency requirement.

### Electives II (6 hours)

Select hours from Broadcast & Cinematic Arts:

BCA 211WI - Writing for Multimedia 3(3-0)  
 BCA 223 - Video Production 3(1-4)  
 BCA 265QR - Understanding Media Measurement 3(3-0)  
 BCA 317 - Electronic Media Performance 3(2-2)  
 BCA 318WI - Electronic Media News Writing 3(3-0)  
 BCA 332 - Multi-Platform Media Production 3(2-2)  
 BCA 511 - Electronic Media Sales 3(3-0)

### Electives III (3 hours)

Select hours from Business and Management:

BIS 260WI - Global Business Communication 3(3-0)  
 BLR 202 - Legal Environment of Business 3(3-0)  
 ENT 210 - Accounting Concepts for Entrepreneurs 3(3-0)  
 ENT 213 - Economics for Entrepreneurs 3(3-0)  
 MGT 210/HSA 210 - Effective Supervision: Principles and Practices 3(3-0)  
 MGT 310 - Small Business Management 3(3-0)

### Electives IV (3 hours)

Select hours from Integrated Marketing:

ENT 221 - Marketing Strategies for Entrepreneurs 3(3-0)  
 JRN 360 - Advertising Principles 3(3-0)  
 MKT 300 - Introduction to Marketing 3(3-0)  
 MKT 340 - Personal Selling 3(3-0)  
 PSC 327 - Lobbying and Interest Group Behavior 3(3-0)  
 PSY 337 - Psychology of Advertising 3(3-0)

### Electives V (3 hours)

Select hours from Social Media and Multi-Media:

ART 125 - Digital Design 3(0-6)  
 ART 231 - Introduction to Graphic Design 3(0-6)  
 BIS 308 - Visual Business Communication and Digital Media 3(3-0)  
 BIS 327 - Web Site Development 3(3-0)  
 CPS 282 - Introduction to Multimedia Design 3(3-0)  
 ENT 300 - Digital Entrepreneurship 3(3-0)  
 JRN 339 - Social Media: Reputation, Image and Interaction 3(3-0)  
 JRN 340 - Introduction to Digital Journalism 3(3-0)  
 JRN 375 - Digital and Social Media Analytics 3(3-0)

**Total: 61 semester hours**

## Journalism Major: Public Relations Concentration

*B.A. degree, B.A.A. degree, or B.S. degree*

A Journalism major requires 48 hours of journalism coursework.

The Strategic Communication area of the School of Communication, Journalism, and Media requires that ALL graduating seniors take an exit exam prior to graduation as part of the department's assessment efforts.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students majoring in Journalism (public relations concentration) must meet the criteria established by the Accrediting Council on Education in Journalism and Mass Communications. That means that they must take liberal arts and sciences courses in compliance with CMU's University Program requirements, listed under the University Program for the B.A., B.A.A., or B.S. degree. A grade of C or better is required in each course counted toward the major and an overall grade point average of 2.5 for all journalism courses counted toward the major.

The last 18 hours of public relations course work leading to a Journalism Major: Public Relations Concentration should be taken within the Strategic Communication area of the School of Communication, Journalism and Media at CMU. No more than 3 credits of journalism internship can be applied toward the major.

Each student must consult with a Strategic Communication advisor before registering for courses each semester to ensure orderly progress toward meeting these requirements.

### Required Courses I (3 hours)

Select one of the following:

JRN 101 - Media and Society 3(3-0)  
 JRN 102 - Introduction to Journalism 3(3-0)

### Required Courses II (33 hours)

JRN 202WI - Writing for the Mass Media 3(3-0)  
 JRN 203QR - Information Gathering for the Mass Media 3(3-0)  
 JRN 220 - Basic Media Photography 3(3-0)  
 JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)  
 JRN 339 - Social Media: Reputation, Image and Interaction 3(3-0)  
 JRN 353 - Foundations of Strategic Public Relations 3(3-0)  
 JRN 369 - Advertising and Public Relations Research 3(3-0)  
 JRN 375 - Digital and Social Media Analytics 3(3-0)  
 JRN 404 - Law of Mass Communication 3(3-0)  
 JRN 450WI - Public Relations Writing 3(3-0)  
 JRN 551WI - Case Studies in Public Relations 3(3-0)  
 JRN 556 - Public Relations Seminar 3(3-0)  
 JRN 559 - Public Relations Internship 1-4(Spec)

(continued)

**Required Courses III (3 hours)**

Select one of the following:

JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)

JRN 380 - Racial and Cultural Diversity: Mass Media's Role 3(3-0)

**Required Courses IV (3 hours)**

Select one of the following:

JRN 340 - Introduction to Digital Journalism 3(3-0)

JRN 402 - Advanced Media Graphics and Visual Communication 3(3-0)

**Total: 48 semester hours**

## Communication

### Communication Major

*B.A. degree, B.A.A. degree, or B.S. degree*

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**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Any student in good academic standing at CMU may declare a major in Communication. Every student intending to major in Communication must contact a Communication faculty advisor to declare the major and plan their course of study.

A minimum 2.0 GPA (C) must be earned in the major.

**Required Courses (9 hours)**

At least 9 credit hours of COM courses must be taken at the 400- or 500-level with at least 3 credit hours at the 500-level.

**Electives (30 hours)**

Select additional hours of COM courses.

No more than 6 hours total from COM 464, COM 490, and COM 495 may count toward the major.

**Total: 39 semester hours**

### Communication Minor

*B.A. degree, B.A.A. degree, B.S. degree, or B.S.B.A. degree*

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**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Any student in good academic standing at CMU may declare a minor in Communication. Every student intending to minor in Communication must contact a Communication faculty advisor to declare the minor and plan their course of study.

**Required Courses (6 hours)**

At least 6 credit hours must be taken at the 400- or 500-level with at least 3 credit hours at the 500-level.

**Electives (15 hours)**

Select additional hours of COM.

No more than 6 total hours from any combination of COM 464, COM 490, and COM 495 may count toward the major

**Total: 21 semester hours**

### Undergraduate Certificate - Professional Communication and Presentation Skills

The Professional Communication and Presentation Skills certificate is aimed at undergraduate students interested in developing and refining their presentation skills across various contexts in professional settings. The Professional Communication and Presentation Skills certificate is a 12 credit hour undergraduate certificate.

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**ADMISSION REQUIREMENTS, RETENTION AND TERMINATION STANDARDS**

- Students who are currently enrolled at Central Michigan University may be admitted to this program.
  - All courses on the certificate are letter graded.
  - The minimum cumulative GPA based on all graded coursework for the certificate can be no lower than a 2.0.
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**Required Courses (12 hours)**

Select 12 hours, with at least 6 hours being 300 level or above, from the following:

COM 101 - Introduction to Communication 3(3-0)

COM 103 - Oral Communication in the Online Environment 3(3-0)

COM 225 - Introduction to Communication in Virtual Environments 3(3-0)

COM 267 - Introduction to Debate 3(3-0)

COM 353 - Small Group Communication 3(3-0)

COM 357 - Public Speaking 3(3-0)

COM 363 - Principles and Types of Interviewing 3(3-0)

COM 365 - Persuasion and Social Influence 3(3-0)

**Note:** Only one of COM 101 or COM 103 may be counted for this certificate.

**Total: 12 semester hours**

## Journalism

### Journalism Major

*B.A. degree, B.A.A. degree, or B.S. degree*

A Journalism Major requires 42 hours of journalism coursework.

The School of Communication, Journalism, and Media requires that ALL graduating seniors take an exit exam prior to graduation as part of the department's assessment effort.

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**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

A Journalism Major requires 42 hours of journalism coursework.

The Journalism Area of the School of Communication, Journalism, and Media Arts requires that ALL graduating seniors take an exit exam prior to graduation as part of the department's assessment efforts.

Students majoring in Journalism must meet the criteria established by the Accrediting Council on Education in Journalism and Mass Communications. That means that they must take liberal arts and sciences courses in compliance with CMU's University Program requirements, listed under the University Program for the B.A., B.A.A., or B.S. degree. A grade of C or better is required in each course counted toward the Journalism Major and an overall grade point average of 2.5 for all journalism courses counted toward the major.

The last 18 hours of journalism course work leading to a journalism major should be taken within the Journalism Area of the School of Communication, Journalism and Media at CMU. No more than 3 credits of journalism internship can be applied toward the major.

Each student must consult with a Journalism Area faculty advisor before registering for courses each semester to ensure orderly progress toward meeting these requirements.

**Required Courses I (3 hours)**

Select one of the following:

JRN 101 - Media and Society 3(3-0)

JRN 102 - Introduction to Journalism 3(3-0)

**Required Courses II (21 hours)**

JRN 202WI - Writing for the Mass Media 3(3-0)

JRN 203QR - Information Gathering for the Mass Media 3(3-0)

JRN 220 - Basic Media Photography 3(3-0)

JRN 312WI - Reporting 3(3-0)

JRN 315 - Editing 3(3-0)

JRN 340 - Introduction to Digital Journalism 3(3-0)

JRN 404 - Law of Mass Communication 3(3-0)

**Required Courses III (3 hours)**

Select one of the following:

JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)

JRN 380 - Racial and Cultural Diversity: Mass Media's Role 3(3-0)

**Required Courses IV (3 hours)**

Select one of the following:

JRN 448 - Journalism Practicum 1-3(Spec)

JRN 449 - Journalism Internship 3(Spec)

**Required Courses V (3 hours)**

Select one of the following:

JRN 445 - Multimedia Reporting Capstone 3(3-0)

JRN 500 - Current Issues in Mass Communication 3(3-0)

**Electives (9 hours)**

Select from the following:

JRN 250 - Social Media: Managing the Message 3(3-0)

JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)

JRN 339 - Social Media: Reputation, Image and Interaction 3(3-0)

JRN 375 - Digital and Social Media Analytics 3(3-0)

JRN 417WI - Sports Reporting 3(3-0)

JRN 423 - Online Visual Storytelling 3(3-0)

JRN 430WI - Magazine and Feature Writing 3(3-0)

JRN 440 - Advanced Digital Journalism 3(3-0)

JRN 441 - Data Journalism 3(3-0)

JRN 516WI - Public Affairs Reporting 3(3-0)

JRN 597 - Special Studies 1-6(Spec)

**OR** another JRN course as approved by the advisor.

**Total: 42 semester hours**

**Journalism Minor**

*B.A. degree; B.A.A. degree; B.F.A. degree; B.S. degree, or B.S.B.A. degree*

A journalism minor requires at least 21 hours of journalism course work. A grade of C or better is required in each course counted toward the minor.

**Required Courses I (3 hours)**

Select one of the following:

JRN 101 - Media and Society 3(3-0)

JRN 102 - Introduction to Journalism 3(3-0)

**Required Courses II (12 hours)**

JRN 202WI - Writing for the Mass Media 3(3-0)

JRN 203QR - Information Gathering for the Mass Media 3(3-0)

JRN 312WI - Reporting 3(3-0)

JRN 340 - Introduction to Digital Journalism 3(3-0)

**Electives I (3 hours)**

Select one of the following:

JRN 220 - Basic Media Photography 3(3-0)

JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)

**OR** one advanced journalism writing course (numbered 300 or above) as approved by the minor advisor.

**Electives II (3 hours)**

One journalism course in theory or principles as approved by the minor advisor.

**Total: 21 semester hours**

**Photojournalism Major**

*B.A. degree, B.A.A. degree, or B.S. degree*

A Photojournalism Major requires 42 hours of journalism coursework.

The School of Communication, Journalism, and Media requires that ALL graduating seniors take an exit exam prior to graduation as part of the department's assessment efforts.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Students majoring in Photojournalism must meet the criteria established by the Accrediting Council on Education in Journalism and Mass Communications. That means that they must take liberal arts and sciences courses in compliance with CMU's University Program requirements, listed under the University Program for the B.A., B.A.A., or B.S. degrees. A grade of C or better is required in each course counted toward the Photojournalism major and an overall grade point average of 2.5 for all journalism courses counted toward the major.

The last 18 hours of Photojournalism course work leading to a Photojournalism major should be taken within the Journalism Area of the School of Communication, Journalism and Media at CMU. No more than 3 credits of journalism internship can be applied toward the major.

Each student must consult with a Journalism Area faculty advisor before registering for courses each semester to ensure orderly progress toward meeting these requirements.

**Required Courses I (3 hours)**

Select one of the following:

JRN 101 - Media and Society 3(3-0)

JRN 102 - Introduction to Journalism 3(3-0)

**Required Courses II (12 hours)**

JRN 202WI - Writing for the Mass Media 3(3-0)

JRN 220 - Basic Media Photography 3(3-0)

JRN 340 - Introduction to Digital Journalism 3(3-0)

JRN 404 - Law of Mass Communication 3(3-0)

**Required Courses III (3 hours)**

Select one of the following:

JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)

JRN 380 - Racial and Cultural Diversity: Mass Media's Role 3(3-0)

**Required Courses IV (21 hours)**

JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)

JRN 320 - Photo Editing 3(3-0)

JRN 420 - Photography Studio Techniques 3(3-0)

JRN 422 - The Picture Story 3(3-0)

JRN 423 - Online Visual Storytelling 3(3-0)

JRN 445 - Multimedia Reporting Capstone 3(3-0)

JRN 521 - Seminar in News Photography 3(3-0)

**Required Courses V (3 hours)**

Select one of the following:

JRN course, 300 level or above, approved by advisor (3 hours) **OR**

JRN 529 - Photojournalism Internship 1-4(Spec)

**Total: 42 semester hours**

**Note:** JRN 420 and 422 are offered in the fall semester and JRN 423 and 521 are offered in the spring semester.

**Social Media, Undergraduate Certificate****Minimum Totals for Graduation: 12 hours**

The purpose of the Undergraduate Certificate in Social Media is to prepare students to understand the history and development of social media, identify the cultural, legal and ethical impact of using social media in society, develop effective social media content, and to analyze its benefits in order to strategically incorporate it in the public or private sector.

**Required Courses (12 hours)**

Select four of the following:

JRN 105 - Social Media in Society 3(3-0)

JRN 250 - Social Media: Managing the Message 3(3-0)

JRN 339 - Social Media: Reputation, Image and Interaction 3(3-0)

JRN 370 - Social Media Legal and Ethical Issues 3(3-0)

JRN 375 - Digital and Social Media Analytics 3(3-0)

**Total: 12 semester hours**



## Media Arts

### Broadcast and Cinematic Arts Major

*B.A. degree, B.A.A. degree, or B.S. degree*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. In order to declare a BCA major or minor, a student must first meet with an assigned BCA advisor.
2. Students pursuing BCA majors and minors are required to earn a minimum grade of C in each BCA core (required) curriculum course both before and after the declaring of the major or minor.

#### Additional Notes for the BCA Major on the BA, BAA, or BS degree:

The minimum requirement for a major is 41 hours. All BCA majors and minors must earn a minimum grade of C in each course required in the curriculum. At least 18 hours of coursework in the major must be taken at CMU. Only 3 hours of intern credit may count toward a major and toward graduation. Courses taken for credit/no credit do not count toward the major except for BCA 329. Only 3 hours of BCA 329 can count toward this major. A list of various career course sequences is available in the School office.

#### Required Courses I (13 hours)

BCA 210 - Revolutions in Mass Media: From Gutenberg to Zuckerberg and Beyond 3(2-2)  
 BCA 222 - Audio Production 3(1-4)  
 BCA 223 - Video Production 3(1-4)  
 BCA 499 - Senior Capstone Seminar 1(1-0)  
 BCA 510 - Electronic Media Law 3(3-0)

#### Required Courses II (6 hours)

*Media Analysis and Cultural Competency*

Select two of the following:  
 BCA 101 - At the Movies: History and Analysis of the Cinema 3(2-2)  
 BCA 309/COM 309 - Mediated Communication and Global Identity 3(3-0)  
 BCA 350/WGS 350 - Women in Film 3(2-2)  
 BCA 351/WGS 351 - Queer Cinema 3(2-2)  
 BCA 503WI - Critiquing Mass Media 3(3-0)  
 BCA 528 - History and Analysis of Documentary Film 3(2-2)

#### Required Courses III (3 hours)

*Media Writing*

Select one of the following:  
 BCA 311WI - Electronic Media Copywriting 3(3-0)  
 BCA 318WI - Electronic Media Newswriting 3(3-0)  
 BCA 506WI - Writing for the Small Screen 3(3-0)  
 BCA 508WI - Writing the Feature-Length Screenplay 3(3-0)

#### Required Courses IV (1 hour)

Select one of the following:  
 BCA 329 - Practicum in Electronic Media 1-8(Spec)  
 BCA 399 - Electronic Media Career Building 1(1-0)  
 BCA 529 - Internship in Electronic Media-Film 1-6(Spec)

#### Electives (18 hours)

BCA course work selected by the student in conjunction with a BCA academic advisor. Nine (9) of these hours must be at the 400 or 500 level. BCA 490 and BCA 529 do not fulfill this 400-500 requirement.

**Total: 41 semester hours**

### Broadcast and Cinematic Arts Minor

*B.A. degree, B.A.A. degree, B.F.A. degree, or B.S. degree*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. In order to declare a BCA major or minor, a student must first meet with an assigned BCA advisor.
2. Students pursuing BCA majors and minors are required to earn a minimum grade of C in each BCA core (required) curriculum course both before and after the declaring of the major or minor.

#### Additional Notes for the BCA Minor on the BA, BAA, BFA, or BS degree:

At least 12 hours of coursework in the minor must be taken at CMU. Only 3 hours of intern credit (BCA 529) may count toward the minor. Courses taken for credit/no credit do not count toward the minor, except for BCA 329. Only 2 hours of BCA 329 can count toward the minor.

#### Required Courses I (9 hours)

BCA 210 - Revolutions in Mass Media: From Gutenberg to Zuckerberg and Beyond 3(2-2)  
 BCA 222 - Audio Production 3(1-4)  
 BCA 223 - Video Production 3(1-4)

#### Required Courses II (3 hours)

Select one of the following:  
 BCA 311WI - Electronic Media Copywriting 3(3-0)  
 BCA 318WI - Electronic Media Newswriting 3(3-0)  
 BCA 506WI - Writing for the Small Screen 3(3-0)  
 BCA 508WI - Writing the Feature-Length Screenplay 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:  
 BCA 101 - At the Movies: History and Analysis of the Cinema 3(2-2)  
 BCA 309/COM 309 - Mediated Communication and Global Identity 3(3-0)  
 BCA 350/WGS 350 - Women in Film 3(2-2)  
 BCA 351/WGS 351 - Queer Cinema 3(2-2)  
 BCA 503WI - Critiquing Mass Media 3(3-0)  
 BCA 528 - History and Analysis of Documentary Film 3(2-2)

#### Required Courses IV (1 hour)

Select one of the following:  
 BCA 329 - Practicum in Electronic Media 1-8(Spec)  
 BCA 399 - Electronic Media Career Building 1(1-0)  
 BCA 529 - Internship in Electronic Media-Film 1-6(Spec)

#### Electives (9 hours)

Minimum of 9 additional hours of BCA coursework selected by the student in conjunction with a BCA academic advisor.

**Total: 25 semester hours**

## Broadcast and Cinematic Arts Minor

Available on B.S.B.A. degree only

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. In order to declare a BCA major or minor, a student must first meet with an assigned BCA advisor.
2. Students pursuing BCA majors and minors are required to earn a minimum grade of C in each BCA core (required) curriculum course both before and after the declaring of the major or minor.

### Additional Notes for the BCA minor on the BSBA degree:

At least 12 hours of coursework in the minor must be taken at CMU. Only 3 hours of intern credit may count toward the minor. Courses taken for credit/no credit do not count toward the minor, except for BCA 329.

### Required Courses I (12 hours)

BCA 210 - Revolutions in Mass Media: From Gutenberg to Zuckerberg and Beyond 3(2-2)  
 BCA 265QR - Understanding Media Measurement 3(3-0)  
 BCA 311WI - Electronic Media Copywriting 3(3-0)  
 BCA 510 - Electronic Media Law 3(3-0)

### Required Courses II (3 hours)

Select one of the following:

BCA 222 - Audio Production 3(1-4)  
 BCA 223 - Video Production 3(1-4)

### Required Courses III (6 hours)

Select two of the following:

BCA 512 - Electronic Media Promotion 3(3-0)  
 BCA 513 - Media Entrepreneurship 3(3-0)  
 BCA 516 - Media Leadership 3(3-0)  
 BCA 524 - Producing Live Television 3(1-4)  
 BCA 533 - The Power of Hybrid Media 3(2-2)  
 BCA 540WI - Recording Industry and Business 3(3-0)

### Required Courses IV (1 hour)

Select one of the following:

BCA 329 - Practicum in Electronic Media 1-8(Spec)  
 BCA 399 - Electronic Media Career Building 1(1-0)  
 BCA 529 - Internship in Electronic Media-Film 1-6(Spec)

**Total: 22 semester hours**

## Cinema Arts Major

B.F.A. degree

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students will be able to sign an intent to major in Cinema Arts during their freshmen year. To sign the major, students must produce a portfolio of their video work after taking BCA 440, which should occur during their sophomore year. Students will be given the parameters of the portfolio during BCA 440 and this course will prepare them to produce the portfolio. Portfolios will be assessed and critiqued by program faculty. Students who do not pass this assessment may produce a second attempt. If students do not pass the second attempt, students will not be accepted to the program. These students will be able to sign a BCA or ART major or switch to a new major.

### Required Courses I - Foundation (18 hours)

ART 106 - Introduction to Drawing 3(0-6)  
 ART 119 - Design Foundations 3(0-6)  
 ART 125 - Digital Design 3(0-6)  
 BCA 211WI - Writing for Multimedia 3(3-0)  
 BCA 222 - Audio Production 3(1-4)  
 BCA 223 - Video Production 3(1-4)

### Required Courses II - History/Business (9 hours)

ART 285 - Introduction to Western Art, Part II 3(3-0)  
 BCA 101 - At the Movies: History and Analysis of the Cinema 3(2-2)  
 BCA 510 - Electronic Media Law 3(3-0)

### Required Courses III - Intermediate (15 hours)

ART 207 - Introduction to Animation: Traditional Media 3(0-6)  
 ART 241 - Introduction to Photography 3(0-6)  
 BCA 421 - Advanced Audio Production 3(2-2)  
 BCA 440 - Introduction to Cinematography 3(2-2)  
 BCA 508WI - Writing the Feature-Length Screenplay 3(3-0)

### Required Courses IV - Advanced (12 hours)

ART 441 - Photography Lighting Studio 3(0-6)  
 BCA 521 - Advanced Cinematography 3(2-2)  
 BCA 522 - Audio Post-Production 3(2-2)  
 BCA 532 - Advanced Video/Multimedia Post-Production 3(2-2)

### Electives I - Study/Theory (12 hours)

Select four of the following courses:

ART 341 - History of Photography 3(3-0)  
 ART 363 - History of Design: 1750-2010 3(3-0)  
 ART 366 - Contemporary Design Issues 3(3-0)  
 ART 385 - European Modernism 3(3-0)  
 ART 485 - Art After 1945 3(3-0)  
 BCA 290 - French Film and Other Media 3(3-0)  
 BCA 350/WGS 350 - Women in Film 3(2-2)  
 BCA 351/WGS 351 - Queer Cinema 3(2-2)  
 BCA 525 - Film Genre Study 3-9(Spec)  
 BCA 527 - Film Directors 3-9(Spec)  
 BCA 528 - History and Analysis of Documentary Film 3(2-2)  
 BCA 575 - Film Theory and Criticism 3(3-0)

### Electives II - Applied/Studio (12 hours)

Select four of the following courses:

ART 222 - 2D Digital Animation 3-6(Spec)  
 ART 231 - Introduction to Graphic Design 3(0-6)  
 ART 308 - Storyboarding for Digital Media 3-6(Spec)  
 ART 349 - Typography 3(0-6)  
 ART 541 - Advanced Photography Studio 1-12(Spec)  
 BCA 441 - Producing and Directing in the Studio 3(2-2)

**Total: 78 semester hours**

## Cinema Studies Minor

*B.A. degree, B.A.A. degree, or B.S. degree*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

BCA 320 is a variable content course and can be taken if film-related, in consultation with program advisor.

BCA 490 can be taken if film-related, in consultation with program advisor and approval of instructor.

BCA 520 is a variable content course and can be taken if film-related, in consultation with program advisor.

Students may apply up to 3 hours of coursework from their BCA major to this minor.

BCA 525 and BCA 527 are variable content courses and can be repeated once as electives for this minor program if content not replicated.

BCA 290, 300, 350, or 351 cannot be double counted as an elective for this minor if chosen for Required Courses II.

### Required Courses (15 hours)

BCA 101 - At the Movies: History and Analysis of Cinema 3(2-2)

BCA 525 - Film Genre Study 3-9(Spec)

BCA 527 - Film Directors 3-9(Spec)

BCA 528 - History and Analysis of Documentary Film 3(2-2)

BCA 575 - Film Theory and Criticism 3(3-0)

### Required Courses II (3 hours)

Select one of the following:

BCA 290 - French Film and Other Media 3(3-0)

BCA 350/WGS 350 - Women in Film 3(2-2)

BCA 351/WGS 351 - Queer Cinema 3(2-2)

### Electives (3 hours)

BCA 290 - French Film and Other Media 3(3-0)

BCA 300 - African and African American Film 3(3-0)

BCA 320 - Special Topics in Electronic Media 1-9(Spec)

BCA 350/WGS 350/WGS 350WI - Women in Film 3(2-2)

BCA 351/WGS 351/WGS 351WI - Queer Cinema 3(2-2)

BCA 490 - Independent Study in Electronic Media 1-4(Spec)

BCA 503WI - Critiquing Mass Media 3(3-0)

BCA 520 - Special Topics in Electronic Media 1-9(Spec)

BCA 525 - Film Genre Study 3-9(Spec)

BCA 527 - Film Directors 3-9(Spec)

ENG 326 - Never-Ending Stories: Adaptation across Media 3(3-0)

**Total: 21 semester hours**

## Corporate Video, Undergraduate Certificate

This 12-15 credit-hour certificate is designed for degree-seeking students of any non-BCA major and non-degree-seeking students who desire to gain experience in producing videos to improve the promotion, funding and operation of their business ventures.

### Required Courses (12 hours)

BCA 211WI - Writing for Multimedia 3(3-0)

BCA 223 - Video Production 3(1-4)

BCA 440 - Introduction to Cinematography 3(2-2)

BCA 531 - Client Based Video Production 3(2-2)

### Optional Course (0-3 hours)

BCA 532 - Advanced Video/Multimedia Post-Production 3(2-2)

**Total: 12-15 semester hours**

## Drone Regulations, Operations, and Applications, Undergraduate Certificate

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This certificate includes Part 107 FAA regulation training, safety training, and flight management operations, and creative applications of drone technology. Students must meet FAA requirements to obtain Part 107 remote pilot's certificate.

### Required Courses (3 hours)

BCA 280/GEO 280 - Drone Regulations 2(2-1)

BCA 281 - Drone Operations 1(1-1)

### Electives (6-7 hours)

Select an option from the following:

#### Option 1: Visual Storytelling (6 hours)

BCA 221 - Smartphone Storytelling 3(1-4)

BCA 223 - Video Production 3(1-4)

BCA 282 - Storytelling with Drones 1(1-1)

BCA 329 - Practicum in Electronic Media 1-8(Spec)

**Note:** You may only count one of BCA 221 or BCA 223.

#### Option 2 - Mapping with Drones (7 hours)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)

GEO 308 - Fundamentals of Remote Sensing 3(2-2)

GEO 397 - Independent Study 1-6(Spec)

**Total: 9-10 semester hours**

## Interdisciplinary

### Advertising Minor

This is an interdepartmental minor. Please check the index for the page number.

### Multimedia Design Minor

This is an interdisciplinary minor. Please check the index for the page number.

## Music (MUS)

For information, please contact the director, 989-774-1945, Music 162;  
<https://www.cmich.edu/academics/colleges/college-arts-media/departments-schools/school-of-music>

### Why Study Music?

Music is a universal human phenomenon. It is one means by which human beings may understand the essence of their culture, and every culture on earth possesses some musical system. Through musical participation, humans are able to make connections with one another in ways that are impossible to achieve by any other means. When students study music, they come to know a dimension of "humanness" that is otherwise closed to them. In a society that increasingly focuses on passive participation, music study provides students with opportunities for active creative involvement. The student who sings or plays an instrument alone or as part of an ensemble is able to reach a part of himself or herself that cannot be discovered in any other way. The student who listens to the works of composers such as Bach or Mozart is communicating across centuries of time with some of the best thinking that the human mind has to offer. Without musical study, a student cannot completely understand what it means to be a human being.

### Music Offerings at CMU

The School of Music provides offerings in four basic areas: curricular programs for students who aspire to careers in music; activities for all students who have an interest in music (all of the musical organizations in the School of Music are open to all students on campus, whether music majors or not); courses for students with a general interest in music; and cultural offerings in the form of recitals, concerts, and lectures, most of which are free of charge.

The School of Music offers majors on Bachelor of Music, Bachelor of Music Education, and Bachelor of Arts or Bachelor of Science degrees. Minors are available on the Bachelor of Arts and Bachelor of Science degrees.

### The Faculty

Ashley Allen, James Batcheller, Jay C. Batzner, Lindabeth Binkley, Bruce Bonnell, Chris Chapman, Keith Clifton, Mark Cox, Molly Cryderman-Weber, Brad DeRoche, Meghan DeWald, Amon Eady, Edward Fedewa, James Fiste, James Flora, Sue G. Gamble, Alan Gumm, Scott Harding, Dave Holland, Jennifer Kitchen, Jeffrey Kressler, Latoya Lain, Robert Lindahl, Susan Lindahl, Alexandra Mascolo-David, José-Lois Maúrtua, MaryBeth Minnis, Timothy Mocny, Neil Mueller, John Nichol, Casey Robards, Jeffrey Schaeffer, Rob Smith, Fangye Sun, Eric Tucker, Tracy Watson, Joanna Cowan White, Kennen White, Adrienne Wiley

## Bachelor of Music Education

Completion of this degree will qualify a student for recommendation to the State Board for a Secondary Standard Certificate, which will permit the holder to teach music in grades K-12.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

#### Admission as a Music Major or Minor

Admission to all music majors and minors requires a successful performance audition and passage of a basic musicianship examination. If a student does not pass the basic musicianship examination, passage of the examination at a later date will fulfill the requirement. A student who has not been accepted into the Music Program may be denied access to music core courses. Further information concerning admission as a music major or minor (including audition dates, appropriate repertoire, and study guides for the basic musicianship examination) is available in the School of Music office, or online at <https://www.cmich.edu/colleges/cam/mus>.

#### Admission to Music Candidacy

Prior to enrolling in classes above 200 level, a student must apply to the School of Music Office for admission to Music Candidacy. Admission to this program will allow a student access to music study at the 300 level and above. Requirements for admission include signed authorizations appropriate to a student's curriculum, passage of a 300 level performance examination on the appropriate instrument, and completion of all 100 and 200 level MUS classes required for the degree with a grade of "C" or better. Tentative admission will be granted if it is clear from the application that it is possible to remove all deficiencies within one academic year. Such tentative admission will be reviewed at the end of that period and access to courses 300 level and above

will be revoked if requirements remain unfulfilled. It is the student's responsibility to document the fulfillment of all admission requirements. Applications for admission to Music Candidacy are available in the School of Music office.

#### Additional Requirements for Music Majors and Minors

Music major and minors on all degree programs must receive a grade of "C" or better in each required MUS course. Credit/No Credit grades are not acceptable on music majors and minors.

Music majors on degrees leading to teaching certification must have completed at least 15 hours of music courses at the 300 level or above including at least two semesters of 300 level applied study in order to student teach. In addition, these students must have a grade of "C+" or better in the following music methods courses in order to graduate: MUS 144, 146, 230, 244, 246, 280, 331, 333, 344, 381, 382, 431, 433, 435, 531, 533, 534.

#### Requirements for Bachelor of Music Education

All students pursuing this degree should see the section on Admission to Teacher Education Programs.

In order to complete this degree a student must complete either the General Music, Instrumental or Choral option. These options require both a major and minor in music. Neither the majors nor the minors are available except on this degree and in the combination below.

A minimum 2.7 GPA (B-) must be earned in all teaching majors and minors.

(continued)



## Music Education Major: Instrumental Option

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information at the beginning of this section.

#### Core Courses I (22 hours)

##### Music Theory, History, and Literature

- 7 semesters of MUS 097.

MUS 097 - Recital Attendance (0-0)

MUS 101 - Fundamentals of Music Theory 4(3-2)

MUS 109 - Introduction to Music Technology 1(1-1)

MUS 201 - Tonality in the Common Practice Period 4(3-2)

MUS 202 - Post-Tonal Music Analysis 4(3-2)

MUS 211 - Historical Survey of Music I 3(3-0)

MUS 304 - Instrumentation and Scoring 3(2-2)

MUS 311 - Historical Survey of Music II 3(3-0)

#### Core Courses II (4 hours)

##### Music Education

MUS 230 - Introduction to Music Education 2(2-0)

MUS 333 - Music Education in the Elementary Grades 2(2-0)

#### Required Courses (12 hours)

##### Applied Study

- 4 semesters of MUS 151-179\* (6 hours)

\*except MUS 158 and MUS 159.

- 4 semesters of MUS 351-379\* (6 hours)

\*except MUS 358 and MUS 359.

- Solo performance (0 hours)

MUS 151 - Organ 1-12(Spec)

MUS 152 - Piano 1-12(Spec)

MUS 153 - Violin 1-12(Spec)

MUS 154 - Viola 1-12(Spec)

MUS 155 - Violoncello 1-12(Spec)

MUS 157 - String Bass 1-12(Spec)

MUS 161 - Flute 1-12(Spec)

MUS 163 - Oboe 1-12(Spec)

MUS 165 - Clarinet 1-12(Spec)

MUS 167 - Bassoon 1-12(Spec)

MUS 169 - Saxophone 1-12(Spec)

MUS 171 - Trumpet 1-12(Spec)

MUS 173 - Horn 1-12(Spec)

MUS 175 - Trombone 1-12(Spec)

MUS 177 - Euphonium 1-12(Spec)

MUS 178 - Tuba 1-12(Spec)

MUS 179 - Percussion 1-12(Spec)

MUS 351 - Organ 1-16(Spec)

MUS 352 - Piano 1-16(Spec)

MUS 353 - Violin 1-16(Spec)

MUS 354 - Viola 1-16(Spec)

MUS 355 - Violoncello 1-16(Spec)

MUS 357 - String Bass 1-16(Spec)

MUS 360 - Harpsichord 1-8(Spec)

MUS 361 - Flute 1-16(Spec)

MUS 363 - Oboe 1-16(Spec)

MUS 365 - Clarinet 1-16(Spec)

MUS 367 - Bassoon 1-16(Spec)

MUS 369 - Saxophone 1-16(Spec)

MUS 371 - Trumpet 1-16(Spec)

MUS 373 - Horn 1-16(Spec)

MUS 375 - Trombone 1-16(Spec)

MUS 377 - Euphonium 1-16(Spec)

MUS 378 - Tuba 1-16(Spec)

MUS 379 - Percussion 1-16(Spec)

**Note:** All applied study used to fulfill these requirements must be on the same instrument.

#### Music Electives (2 hours)

Select any MUS course.

**Total: 40 semester hours**

## Music: Instrumental Minor

### Required Courses I (18 hours)

#### Music Education

MUS 141 - Vocal Techniques I 1(0-2)

MUS 144 - Woodwind Techniques 2(0-4)

MUS 146 - Brass Techniques 2(0-4)

MUS 244 - Double Reed Techniques 1(0-2)

MUS 246 - String Techniques 2(0-4)

MUS 280 - Introduction to Conducting 2(0-4)

MUS 331 - Instrumental Organization 2(2-0)

MUS 344 - Percussion Techniques 2(0-4)

MUS 382 - Advanced Instrumental Conducting 2(0-4)

MUS 431 - Instrumental Classroom and Rehearsal Methods 2(2-1)

### Required Courses II (8 hours)

#### Performance - Ensemble

- 6-7 semesters of MUS 185 or MUS 186 (6-7 hours)

- 1-2 semesters of MUS 281, MUS 285, or MUS 286 (1-2 hours)

If applied study on major is satisfied with MUS 161-179 and MUS 361-379, then a minimum of 2 semesters of MUS 186, marching band section.

MUS 185 - Orchestra 1-8(Spec)

MUS 186 - Band 1-8(Spec)

MUS 281 - Chamber Ensemble 1-8(Spec)

MUS 285 - Percussion Ensemble 1-8(Spec)

MUS 286 - Jazz Ensemble 1-8(Spec)

### Required Courses III (0-3 hours)

#### Performance - Secondary Applied Study

Select one of the following options:

#### Option 1

If Applied Study requirement on major is satisfied with MUS 153-179 and MUS 353-379, then MUS 147, 148, and 247 (3 hours) or passing piano proficiency (0 hours).

MUS 147 - Piano Class I 1(0-2)

MUS 148 - Piano Class II 1(0-2)

MUS 247 - Piano Class III 1(0-2)

#### Option 2

If Applied Study requirements on major is satisfied with MUS 151 or 152, then MUS 153-179\* (3 hours).

\*Except MUS 158 and MUS 159.

**Note:** All applied study used to fulfill the requirements of MUS 153-179 must be on the same instrument.

### Music Electives (1-4 hours)

Select any MUS course.

**Total: 30 semester hours**

## Music Education Major: Choral Option

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information at the beginning of this section.

#### Core Courses I (18 hours)

##### Music Theory, History, and Literature

- 7 semesters of MUS 097.

MUS 097 - Recital Attendance (0-0)

MUS 101 - Fundamentals of Music Theory 4(3-2)

MUS 109 - Introduction to Music Technology 1(1-1)

MUS 201 - Tonality in the Common Practice Period 4(3-2)

MUS 211 - Historical Survey of Music I 3(3-0)

MUS 303 - Form and Analysis 3(3-0)

MUS 311 - Historical Survey of Music II 3(3-0)

#### Core Courses II (3-4 hours)

Select one of the following:

MUS 102 - Theory and Analysis of Popular Music 4(3-2)

MUS 304 - Instrumentation and Scoring 3(2-2)

MUS 305 - Choral Arranging 3(3-0)

### Core Courses III (4 hours)

MUS 230 - Introduction to Music Education 2(2-0)  
MUS 333 - Music Education in the Elementary Grades 2(2-0)

### Required Courses I (4 hours)

MUS 241 - Diction for Singers I 2(1-2)  
MUS 242 - Diction for Singers II 2(1-2)

### Required Courses II (10 hours)

#### Applied Study

- 2 semesters of MUS 150, 151, or 152 (2 hours)
- 2 semesters of MUS 250, 151 or 152 (4 hours)
- 3 semesters of MUS 350, 351, or 352 (4 hours)
- Solo performance (0 hours)

**Note:** All applied study used to fulfill these requirements must be on the same instrument.

MUS 150 - Voice 1-12(Spec)  
MUS 151 - Organ 1-12(Spec)  
MUS 152 - Piano 1-12(Spec)  
MUS 250 - Voice 1-12(Spec)  
MUS 350 - Voice 1-16(Spec)  
MUS 351 - Organ 1-16(Spec)  
MUS 352 - Piano 1-16(Spec)

### Music Electives (0-1 hours)

Select any MUS course.

**Total: 40 semester hours**

## Music: Choral Minor

### Required Courses I (15 hours)

#### Music Education

MUS 246 - String Techniques 2(0-4)  
MUS 280 - Introduction to Conducting 2(0-4)  
MUS 338 - Voice Pedagogy 2(1-2)  
MUS 381 - Choral Conducting and Materials 2(0-4)  
MUS 433 - Secondary Choral & General Music Methods 3(3-0)  
MUS 512 - Choral Literature II (Since 1750) 2(2-0)  
MUS 518 - Song Repertoire 2(1-2)

### Required Courses II (2 hours)

#### Music Education

Select one of the following:

MUS 144 - Woodwind Techniques 2(0-4)  
MUS 146 - Brass Techniques 2(0-4)

### Required Courses III (7 hours)

#### Performance - Ensemble

- 6 semesters of MUS 182, 183, or 282 (6 hours)
- 1 semester of MUS 284 (1 hour)

MUS 182 - Women's Chorus 1-8(Spec)  
MUS 183 - Concert Choir 1-8(Spec)  
MUS 282 - Chamber Singers 1-8(Spec)  
MUS 284 - Techniques for the Singing Actor 1-6(Spec)

### Required Courses IV (0-3 hours)

#### Performance - Secondary Applied Study

Select one of the following options:

#### Option 1

If Applied study requirement on major is satisfied with MUS 150, 250, and 350, then MUS 147, 148, and 247 (3 hours) or passing piano proficiency (0 hours).  
MUS 147 - Piano Class I 1(0-2)  
MUS 148 - Piano Class II 1(0-2)  
MUS 247 - Piano Class III 1(0-2)

#### Option 2

If Applied Study requirement on major is satisfied with MUS 151 or 152, then MUS 150 (3 hours).  
MUS 150 - Voice 1-12(Spec)

### Music Electives (3-6 hours)

Select any MUS courses.

**Total: 30 semester hours**

## Music Education Major: General Music Option

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information at the beginning of this section.

### Core Courses I (19 hours)

#### Music Theory, History, and Literature

- 7 semesters of MUS 097.

MUS 097 - Recital Attendance (0-0)  
MUS 101 - Fundamentals of Music Theory 4(3-2)  
MUS 102 - Theory and Analysis of Popular Music 4(3-2)  
MUS 109 - Introduction to Music Technology 1(1-1)  
MUS 201 - Tonality in the Common Practice Period 4(3-2)  
MUS 211 - Historical Survey of Music I 3(3-0)  
MUS 311 - Historical Survey of Music II 3(3-0)

### Core Courses II (3 hours)

Select one of the following:

MUS 303 - Form and Analysis 3(3-0)  
MUS 304 - Instrumentation and Scoring 3(2-2)  
MUS 305 - Choral Arranging 3(3-0)

### Core Courses III (4 hours)

#### Music Education

MUS 230 - Introduction to Music Education 2(2-0)  
MUS 333 - Music Education in the Elementary Grades 2(2-0)

### Required Courses (9 hours)

#### Applied Study

Passage of 300-Level Jury in one applied area is required.  
Complete one of the following options:

#### Option A

##### Instrumental Emphasis

- MUS 141 and MUS 142 (2)
- 1 semester of MUS 150 (1) Voice
- 4 semesters of MUS 151-179\* (6) Instrumental Study  
\*except for MUS 158 and MUS 159.
- Solo Performance (0)
- 300-Level Proficiency (0)

MUS 141 - Vocal Techniques I 1(0-2)  
MUS 142 - Vocal Techniques II 1(0-2)  
MUS 150 - Voice 1-12(Spec)  
MUS 151 - Organ 1-12(Spec)  
MUS 152 - Piano 1-12(Spec)  
MUS 153 - Violin 1-12(Spec)  
MUS 155 - Violoncello 1-12(Spec)  
MUS 157 - String Bass 1-12(Spec)  
MUS 161 - Flute 1-12(Spec)  
MUS 163 - Oboe 1-12(Spec)  
MUS 165 - Clarinet 1-12(Spec)  
MUS 167 - Bassoon 1-12(Spec)  
MUS 169 - Saxophone 1-12(Spec)  
MUS 171 - Trumpet 1-12(Spec)  
MUS 173 - Horn 1-12(Spec)  
MUS 175 - Trombone 1-12(Spec)  
MUS 177 - Euphonium 1-12(Spec)  
MUS 178 - Tuba 1-12(Spec)  
MUS 179 - Percussion 1-12(Spec)

**Note:** All applied study used to fulfill these requirements must be on the same instrument.

#### Option B

##### Vocal Emphasis

- - 2 semesters of MUS 150 (2) Voice
- - 2 semesters of MUS 250 (4) Voice
- - 3 semesters of MUS 151-179\*, 350, and/or 450 (3) Instrumental and/or Vocal Study  
\*except MUS 158 and MUS 159.
- - Solo Performance (0)
- - 300-Level Proficiency (0)

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MUS 150 - Voice 1-12(Spec)  
 MUS 151 - Organ 1-12(Spec)  
 MUS 152 - Piano 1-12(Spec)  
 MUS 153 - Violin 1-12(Spec)  
 MUS 155 - Violoncello 1-12(Spec)  
 MUS 157 - String Bass 1-12(Spec)  
 MUS 161 - Flute 1-12(Spec)  
 MUS 163 - Oboe 1-12(Spec)  
 MUS 165 - Clarinet 1-12(Spec)  
 MUS 167 - Bassoon 1-12(Spec)  
 MUS 169 - Saxophone 1-12(Spec)  
 MUS 171 - Trumpet 1-12(Spec)  
 MUS 173 - Horn 1-12(Spec)  
 MUS 175 - Trombone 1-12(Spec)  
 MUS 177 - Euphonium 1-12(Spec)  
 MUS 178 - Tuba 1-12(Spec)  
 MUS 179 - Percussion 1-12(Spec)  
 MUS 250 - Voice 1-12(Spec)  
 MUS 350 - Voice 1-16(Spec)  
 MUS 450 - Voice 1-8(Spec)

**Music Electives (5 hours)**

Select any MUS courses.

**Total: 40 semester hours**

**Music: General Music Minor****Required Courses I (16 hours)***Music Education*

MUS 149 - Class Guitar 1(1-0)  
 MUS 280 - Introduction to Conducting 2(0-4)  
 MUS 344 - Percussion Techniques 2(0-4)  
 MUS 381 - Choral Conducting and Materials 2(0-4)  
 MUS 433 - Secondary Choral & General Music Methods 3(3-0)  
 MUS 531 - Orff Techniques 2(1-2)  
 MUS 533 - Kodály Pedagogy 2(1-2)  
 MUS 534 - Music for Pre-School Children 2(2-0)

**Required Courses II (2 hours)***Music Education*

Select one of the following:

MUS 144 - Woodwind Techniques 2(0-4)  
 MUS 146 - Brass Techniques 2(0-4)

**Required Courses III (7-10 hours)***Performance***Ensemble (7 hours)**

- 7 semesters of study comprised of one of the following options:

**Option A***Instrumental Emphasis*

If 300 Level Jury requirement on major is satisfied with MUS 153-179, then 4-5 semesters of MUS 185 or 186 (4-5), 2-3 semesters of MUS 181, 182, 183, and/or 282 (2-3).

**Option B***Vocal Emphasis*

If 300 Level Jury requirement on major is satisfied with MUS 150, 151, 152, and/or 250, then 4-7 semesters of MUS 181, 182, or 183 (4-7), 0-3 semesters of MUS 185, 186, 281, 282, 284-286 (0-3).

MUS 181 - Men's Chorus 1-8(Spec)  
 MUS 182 - Women's Chorus 1-8(Spec)  
 MUS 183 - Concert Choir 1-8(Spec)  
 MUS 185 - Orchestra 1-8(Spec)  
 MUS 186 - Band 1-8(Spec)  
 MUS 281 - Chamber Ensemble 1-8(Spec)  
 MUS 282 - Chamber Singers 1-8(Spec)  
 MUS 284 - Techniques for the Singing Actor 1-6(Spec)  
 MUS 285 - Percussion Ensemble 1-8(Spec)

MUS 286 - Jazz Ensemble 1-8(Spec)

**Secondary Applied Study (0-3 hours)**

- If 300 Level Jury requirement on major is satisfied with MUS 150, 153-179, and/or 250, then MUS 147, 148, and 247 (3) or passing piano proficiency (0).
- If 300 Level Jury requirement on major is satisfied with MUS 151 or 152, then MUS 249 (1).

MUS 147 - Piano Class I 1(0-2)

MUS 148 - Piano Class II 1(0-2)

MUS 247 - Piano Class III 1(0-2)

MUS 249 - Functional Piano 1(0-2)

**Music Electives (2-5 hours)**

Select any MUS courses.

**Total: 30 semester hours**

**Bachelor of Music Degree****ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Admission as a Music Major or Minor Admission to all music majors and minors requires a successful performance audition and passage of a basic musicianship examination. If a student does not pass the basic musicianship examination, passage of the examination at a later date will fulfill the requirement. A student who has not been accepted into the Music Program may be denied access to music core courses. Further information concerning admission as a music major or minor (including audition dates, appropriate repertoire, and study guides for the basic musicianship examination) is available in the School of Music office, or online at <https://www.cmich.edu/colleges/cam/mus>.

**Admission to Music Candidacy**

Prior to enrolling in classes above 200 level, a student must apply to the School of Music Office for admission to Music Candidacy. Admission to this program will allow a student access to music study at the 300 level and above. Requirements for admission include signed authorizations appropriate to a student's curriculum, passage of a 300 level performance examination on the appropriate instrument, and completion of all 100 and 200 level MUS classes required for the degree with a grade of "C" or better. Tentative admission will be granted if it is clear from the application that it is possible to remove all deficiencies within one academic year. Such tentative admission will be reviewed at the end of that period and access to courses 300 level and above will be revoked if requirements remain unfulfilled. It is the student's responsibility to document the fulfillment of all admission requirements. Applications for admission to Music Candidacy are available in the School of Music office.

**Additional Requirements for Music Majors and Minors**

Music major and minors on all degree programs must receive a grade of "C" or better in each required MUS course. Credit/No Credit grades are not acceptable on music majors and minors.

**Music: Composition Major****ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

See the information at the beginning of this section.

**Core Courses (18 hours)**

7 semesters of MUS 097.

MUS 097 - Recital Attendance (0-0)  
 MUS 101 - Fundamentals of Music Theory 4(3-2)  
 MUS 109 - Introduction to Music Technology 1(1-1)  
 MUS 201 - Tonality in the Common Practice Period 4(3-2)  
 MUS 211 - Historical Survey of Music I 3(3-0)  
 MUS 303 - Form and Analysis 3(3-0)  
 MUS 311 - Historical Survey of Music II 3(3-0)

**Required Courses I (10 hours)**

MUS 202 - Post-Tonal Music Analysis 4(3-2)  
 MUS 304 - Instrumentation and Scoring 3(2-2)  
 MUS 506 - Advanced Scoring 3(3-0)

**Required Courses II (3 hours)**

Select one of the following:

MUS 302 - Contrapuntal Techniques 3(3-0)  
 MUS 309 - Electroacoustic Music 3(3-0)

**Required Courses III (3 hours)**

Select one of the following:

MUS 305 - Choral Arranging 3(3-0)  
 MUS 520 - Jazz Arranging 3(3-0)

**Required Courses IV (3 hours)**

Select one of the following:

MUS 504 - Seminar in Compositional Techniques 3-9(Spec)  
 MUS 505 - Seminar in Contemporary Music Analysis 3(3-0)

**Required Courses V (14 hours)***Applied Courses*

- Recital (0)

Select one of the following options:

**Option 1 (14 hours)**

- 4 semesters of MUS 158 (6 hours)
  - 4 semesters of MUS 358 (8 hours)
- MUS 158 - Composition 1-12(Spec)  
 MUS 358 - Composition 2-8(Spec)

**Option 2 (14 hours)**

- MUS 107 for 2 hours
  - 2 semesters of MUS 158 (4 hours)
  - 4 semesters of MUS 358 (8 hours)
- MUS 107 - The Craft of Composition 2(2-0)  
 MUS 158 - Composition 1-12(Spec)  
 MUS 358 - Composition 2-8(Spec)

**Required Courses VI (4 hours)***Supportive Courses in Music*

- MUS 147, 148, 247, 249 and/or MUS 152 (4 hours). Specific courses determined by placement exam.

MUS 147 - Piano Class I 1(0-2)  
 MUS 148 - Piano Class II 1(0-2)  
 MUS 152 - Piano 1-12(Spec)  
 MUS 247 - Piano Class III 1(0-2)  
 MUS 249 - Functional Piano 1(0-2)

**Required Courses VII (8 hours)***Supportive Courses in Music*

- 6 semesters of ensemble (6 hours)
- MUS 280 (2 hours)

MUS 280 - Introduction to Conducting 2(0-4)

**Required Courses VIII (6 hours)***Applied Study*

Select 6 hours from the following:

MUS 141 - Vocal Techniques I 1(0-2)  
 MUS 144 - Woodwind Techniques 2(0-4)  
 MUS 146 - Brass Techniques 2(0-4)  
 MUS 244 - Double Reed Techniques 1(0-2)  
 MUS 246 - String Techniques 2(0-4)  
 MUS 344 - Percussion Techniques 2(0-4)

Or:

MUS 150-179, 250, and/or 350-379\*  
 \*except MUS 158 and 358.

**Other Requirements (6 hours)***Supportive Courses outside Music*

BCA 540WI - Recording Industry and Business 3(3-0)  
 ENG 294WI - Introduction to Creative Writing 3(3-0)

**Music Electives (14 hours)**

Select any MUS course at the 300 level or higher.

**Total: 89 semester hours**

**Music: Orchestral Instruments Major****ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

See the information at the beginning of this section.

**Core Courses (18 hours)**

7 semesters of MUS 097.

MUS 097 - Recital Attendance (0-0)  
 MUS 101 - Fundamentals of Music Theory 4(3-2)  
 MUS 109 - Introduction to Music Technology 1(1-1)  
 MUS 201 - Tonality in the Common Practice Period 4(3-2)  
 MUS 211 - Historical Survey of Music I 3(3-0)  
 MUS 303 - Form and Analysis 3(3-0)  
 MUS 311 - Historical Survey of Music II 3(3-0)

**Required Courses I (15 hours)**

MUS 202 - Post-Tonal Music Analysis 4(3-2)  
 MUS 280 - Introduction to Conducting 2(0-4)  
 MUS 302 - Contrapuntal Techniques 3(3-0)  
 MUS 304 - Instrumentation and Scoring 3(2-2)  
 MUS 314WI - History of Symphonic Literature 3(3-0)

**Required Courses II (9-10 hours)**

Select three of the following:

MUS 102 - Theory and Analysis of Popular Music 4(3-2)  
 MUS 504 - Seminar in Compositional Techniques 3-9(Spec)  
 MUS 505 - Seminar in Contemporary Music Analysis 3(3-0)  
 MUS 507 - Music Theory Pedagogy 3(3-0)  
 MUS 515 - History of Opera 3(3-0)  
 MUS 520 - Jazz Arranging 3(3-0)

**Required Courses III (36 hours)***Major Area Performance Courses*

- 4 semesters of MUS 153 - 179 (8 hours)  
 \*Except MUS 158 and 159
- 4 semesters of MUS 353 - 379 (16 hours)  
 \*Except MUS 358 and 359
- Junior Recital (0 hours), Senior Recital (0 hours)
- 8 semesters of MUS 185 or MUS 186 (8 hours)
- 4 semesters of MUS 281 or MUS 285 (4 hours)

**Note:** All applied study used to fulfill these requirements must be on the same instrument.

MUS 153 - Violin 1-12(Spec)  
 MUS 154 - Viola 1-12(Spec)  
 MUS 155 - Violoncello 1-12(Spec)  
 MUS 157 - String Bass 1-12(Spec)  
 MUS 161 - Flute 1-12(Spec)  
 MUS 163 - Oboe 1-12(Spec)  
 MUS 167 - Bassoon 1-12(Spec)  
 MUS 169 - Saxophone 1-12(Spec)  
 MUS 171 - Trumpet 1-12(Spec)  
 MUS 173 - Horn 1-12(Spec)  
 MUS 175 - Trombone 1-12(Spec)  
 MUS 177 - Euphonium 1-12(Spec)  
 MUS 178 - Tuba 1-12(Spec)  
 MUS 179 - Percussion 1-12(Spec)  
 MUS 185 - Orchestra 1-8(Spec)  
 MUS 186 - Band 1-8(Spec)  
 MUS 281 - Chamber Ensemble 1-8(Spec)  
 MUS 285 - Percussion Ensemble 1-8(Spec)  
 MUS 353 - Violin 1-16(Spec)  
 MUS 354 - Viola 1-16(Spec)  
 MUS 355 - Violoncello 1-16(Spec)  
 MUS 357 - String Bass 1-16(Spec)  
 MUS 360 - Harpsichord 1-8(Spec)  
 MUS 361 - Flute 1-16(Spec)  
 MUS 363 - Oboe 1-16(Spec)  
 MUS 365 - Clarinet 1-16(Spec)  
 MUS 367 - Bassoon 1-16(Spec)  
 MUS 369 - Saxophone 1-16(Spec)

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MUS 371 - Trumpet 1-16(Spec)  
 MUS 373 - Horn 1-16(Spec)  
 MUS 375 - Trombone 1-16(Spec)  
 MUS 377 - Euphonium 1-16(Spec)  
 MUS 378 - Tuba 1-16(Spec)  
 MUS 379 - Percussion 1-16(Spec)

**Required Courses IV (3 hours)***Supportive Courses in Music*

**Note:** MUS 147, 148, 247, 249, and/or MUS 152. Specific courses determined by placement exam.

MUS 147 - Piano Class I 1(0-2)  
 MUS 148 - Piano Class II 1(0-2)  
 MUS 152 - Piano 1-12(Spec)  
 MUS 247 - Piano Class III 1(0-2)  
 MUS 249 - Functional Piano 1(0-2)

**Music Electives (7-8 hours)**

Select any MUS course at the 300 level or higher.

**Total: 89 semester hours**

**Music: Piano Major****ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

See the information at the beginning of this section.

**Core Courses (18 hours)**

- 7 semesters of MUS 097.

MUS 097 - Recital Attendance (0-0)  
 MUS 101 - Fundamentals of Music Theory 4(3-2)  
 MUS 109 - Introduction to Music Technology 1(1-1)  
 MUS 201 - Tonality in the Common Practice Period 4(3-2)  
 MUS 211 - Historical Survey of Music I 3(3-0)  
 MUS 303 - Form and Analysis 3(3-0)  
 MUS 311 - Historical Survey of Music II 3(3-0)

**Required Courses I (3-4 hours)**

Select one of the following:

MUS 202 - Post-Tonal Music Analysis 4(3-2)  
 MUS 302 - Contrapuntal Techniques 3(3-0)

**Required Courses II (33 hours)***Major Area Performance Courses*

- 4 semesters of MUS 152 (8 hours)
- 2 semesters of MUS 150 Voice, MUS 151 Organ OR MUS 360 Harpsichord (2 hours)
- 4 semesters of MUS 352 (16 hours)
- Junior Recital (0 hours), Senior Recital (0 hours)
- 7 semesters of MUS 180, MUS 181, MUS 182, MUS 183, MUS 185, MUS 186, MUS 281 OR MUS 282 (7 hours)

MUS 150 - Voice 1-12(Spec)  
 MUS 151 - Organ 1-12(Spec)  
 MUS 152 - Piano 1-12(Spec)  
 MUS 180 - Festival Chorus 1-8(Spec)  
 MUS 181 - Men's Chorus 1-8(Spec)  
 MUS 182 - Women's Chorus 1-8(Spec)  
 MUS 183 - Concert Choir 1-8(Spec)  
 MUS 185 - Orchestra 1-8(Spec)  
 MUS 186 - Band 1-8(Spec)  
 MUS 281 - Chamber Ensemble 1-8(Spec)  
 MUS 282 - Chamber Singers 1-8(Spec)  
 MUS 352 - Piano 1-16(Spec)  
 MUS 360 - Harpsichord 1-8(Spec)

**Required Courses III (8 hours)***Supportive Courses in Music*

MUS 189 - Introduction to Accompanying 1(0-2)  
 MUS 236 - Piano Pedagogy I 2(2-0)  
 MUS 237 - Piano Pedagogy II 2(2-0)  
 MUS 249 - Functional Piano 1(0-2)  
 MUS 280 - Introduction to Conducting 2(0-4)

**Required Courses IV (1-2 hours)***Supportive Courses in Music*

Select one of the following:

MUS 241 - Diction for Singers I 2(1-2)  
 MUS 339 - Piano Pedagogy Practicum 1(1-1)

**Required Courses V (8-9 hours)**

Select three of the following:

MUS 102 - Theory and Analysis of Popular Music 4(3-2)  
 MUS 242 - Diction for Singers II 2(1-2)  
 MUS 304 - Instrumentation and Scoring 3(2-2)  
 MUS 504 - Seminar in Compositional Techniques 3-9(Spec)  
 MUS 505 - Seminar in Contemporary Music Analysis 3(3-0)  
 MUS 507 - Music Theory Pedagogy 3(3-0)  
 MUS 512 - Choral Literature II (Since 1750) 2(2-0)  
 MUS 515 - History of Opera 3(3-0)

**Other Requirements (8 hours)***Supportive Courses outside Music*

Select one of the following options:

**Option I (8 hours)**

FRN 101 - Elementary French I 4(4-0)  
 FRN 102 - Elementary French II 4(4-0)

**Option II (8 hours)**

GER 101 - Elementary German I: Language and Culture 4(4-0)  
 GER 102 - Elementary German II: Language and Culture 4(4-0)

**Music Electives (7-10 hours)**

Select any MUS courses at the 300 level or above.

**Total: 89 semester hours**

**Music: Voice Major****ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

See the information at the beginning of this section.

**Core Courses (18 hours)**

7 semesters of MUS 097.

MUS 097 - Recital Attendance (0-0)  
 MUS 101 - Fundamentals of Music Theory 4(3-2)  
 MUS 109 - Introduction to Music Technology 1(1-1)  
 MUS 201 - Tonality in the Common Practice Period 4(3-2)  
 MUS 211 - Historical Survey of Music I 3(3-0)  
 MUS 303 - Form and Analysis 3(3-0)  
 MUS 311 - Historical Survey of Music II 3(3-0)

**Required Courses I (3-4 hours)**

Select one of the following:

MUS 202 - Post-Tonal Music Analysis 4(3-2)  
 MUS 302 - Contrapuntal Techniques 3(3-0)  
 MUS 305 - Choral Arranging 3(3-0)

**Required Courses II (10 hours)***Supportive Courses in Music*

MUS 241 - Diction for Singers I 2(1-2)  
 MUS 242 - Diction for Singers II 2(1-2)  
 MUS 280 - Introduction to Conducting 2(0-4)  
 MUS 338 - Voice Pedagogy 2(1-2)  
 MUS 518 - Song Repertoire 2(1-2)

**Required Courses III (28 hours)***Major Area Performance Courses*

- 2 semesters of MUS 150 (4 hours)
- 2 semesters of MUS 250 (4 hours)
- 2 semesters of MUS 350 (4 hours)
- 2 semesters of MUS 450 (8 hours)
- Junior Recital (0 hours)
- Senior Recital (0 hours)
- 6 semesters of MUS 182, 183, or 282 (6 hours)
- 2 semesters of MUS 284 (2 hours)

MUS 150 - Voice 1-12(Spec)  
 MUS 182 - Women's Chorus 1-8(Spec)  
 MUS 183 - Concert Choir 1-8(Spec)  
 MUS 250 - Voice 1-12(Spec)  
 MUS 282 - Chamber Singers 1-8(Spec)  
 MUS 284 - Techniques for the Singing Actor 1-6(Spec)  
 MUS 350 - Voice 1-16(Spec)  
 MUS 450 - Voice 1-8(Spec)

#### Required Courses IV (3 hours)

##### Supportive Courses in Music

- 3 hours of MUS 147, 148, 247, 249; and/or MUS 152; specific courses determined by a placement exam.

MUS 147 - Piano Class I 1(0-2)  
 MUS 148 - Piano Class II 1(0-2)  
 MUS 152 - Piano 1-12(Spec)  
 MUS 247 - Piano Class III 1(0-2)  
 MUS 249 - Functional Piano 1(0-2)

#### Other Requirements (16 hours)

##### Supportive Courses outside Music

FRN 101 - Elementary French I 4(4-0)  
 FRN 102 - Elementary French II 4(4-0)  
 GER 101 - Elementary German I: Language and Culture 4(4-0)  
 GER 102 - Elementary German II: Language and Culture 4(4-0)

#### Music Electives (10-11 hours)

Select any MUS course at the 300 level or higher.

**Total: 89 semester hours**

## Bachelor of Arts or Bachelor of Science Degree

The music major on these degrees is designed for students preparing for careers as musicologists, composers, music librarians, performers, or church musicians who prefer to study music within a broad-based liberal arts degree program or for those students who wish to combine a music major with a second major in another discipline.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Admission as a Music Major or Minor Admission to all music majors and minors requires a successful performance audition and passage of a basic musicianship examination. If a student does not pass the basic musicianship examination, passage of the examination at a later date will fulfill the requirement. A student who has not been accepted into the Music Program may be denied access to music core courses. Further information concerning admission as a music major or minor (including audition dates, appropriate repertoire, and study guides for the basic musicianship examination) is available in the School of Music office, or online at <https://www.cmich.edu/colleges/cam/mus>.

#### Admission to Music Candidacy

Prior to enrolling in classes above 200 level, a student must apply to the School of Music Office for admission to Music Candidacy. Admission to this program will allow a student access to music study at the 300 level and above. Requirements for admission include declaring a major or minor appropriate to a student's curriculum, passage of a 300 level performance examination on the appropriate instrument, and completion of all 100 and 200 level MUS classes required for the major with a grade of "C" or better. Tentative admission will be granted if it is clear from the application that it is possible to remove all deficiencies within one academic year. Such tentative admission will be reviewed at the end of that period and access to courses 300 level and above will be revoked if requirements remain unfulfilled. It is the student's responsibility to document the fulfillment of all admission requirements. Applications for admission to Music Candidacy are available in the School of Music office.

#### Additional Requirements for Music Majors and Minors

Music major and minors on all degree programs must receive a grade of "C" or better in each required MUS course. Credit/No Credit grades are not acceptable on music majors and minors.

## Music Major

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information above.

#### Core Courses I (11 hours)

##### Music Theory, History, and Literature

Note: 4 hours of MUS 097.

MUS 097 - Recital Attendance (0-0)  
 MUS 101 - Fundamentals of Music Theory 4(3-2)  
 MUS 109 - Introduction to Music Technology 1(1-1)  
 MUS 211 - Historical Survey of Music I 3(3-0)  
 MUS 311 - Historical Survey of Music II 3(3-0)

#### Core Courses II (8 hours)

Select two of the following:

MUS 102 - Theory and Analysis of Popular Music 4(3-2)  
 MUS 201 - Tonality in the Common Practice Period 4(3-2)  
 MUS 202 - Post-Tonal Music Analysis 4(3-2)

#### Required Courses I (5 hours)

##### Performance - Applied Study

- 4 semesters of study on same instrument at 100, 200, 300 and/or 400 level (5 hours)
- 300 level proficiency (0 hours)
- Solo Performance (0 hours)

#### Required Courses II (6 hours)

##### Performance - Ensemble

- 4-5 semesters of MUS 182, MUS 183, MUS 185, or MUS 186 (4-5 hours)
- 1-2 semesters of MUS 281, MUS 282, MUS 284, MUS 285, or MUS 286 (1-2 hours)

MUS 182 - Women's Chorus 1-8(Spec)  
 MUS 183 - Concert Choir 1-8(Spec)  
 MUS 185 - Orchestra 1-8(Spec)  
 MUS 186 - Band 1-8(Spec)  
 MUS 281 - Chamber Ensemble 1-8(Spec)  
 MUS 282 - Chamber Singers 1-8(Spec)  
 MUS 284 - Techniques for the Singing Actor 1-6(Spec)  
 MUS 285 - Percussion Ensemble 1-8(Spec)  
 MUS 286 - Jazz Ensemble 1-8(Spec)

#### Music Electives (10 hours)

Select any MUS courses at the 300 level or above.

**Total semester hours: 40**

## Music Minor

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information above.

#### Required Courses I (4 hours)

MUS 101 - Fundamentals of Music Theory 4(3-2)

#### Required Courses II (4 hours)

Select one of the following:

MUS 102 - Theory and Analysis of Popular Music 4(3-2)  
 MUS 201 - Tonality in the Common Practice Period 4(3-2)  
 MUS 202 - Post-Tonal Music Analysis 4(3-2)

#### Required Courses III (3 hours)

Select one of the following:

MUS 110 - Music in Society 3(3-0)  
 MUS 114 - Listening Experience: Expand Your Playlist 3(3-0)

#### Required Courses IV (4 hours)

2 semesters of Applied Study (2 hours)  
 2 semesters of Ensemble (2 hours)

#### Electives (5 hours)

Select any MUS courses.

**Total: 20 semester hours**

## Bachelor of Applied Arts

### Commercial Music Major

*B.A.A. degree*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Any student in good academic standing at CMU may sign a major in Commercial Music. Every student intending to major in Commercial Music must meet with an advisor to specify the course of study. A minimum 2.3 GPA must be earned in the major.

Students must minor in Broadcast and Cinematic Arts, Business Administration, Multimedia Design, Entrepreneurship, Finance, Game Design Thinking, Music, or Songwriting.

#### Required Courses I (14 hours)

MUS 101 - Fundamentals of Music Theory 4(3-2)  
MUS 102 - Theory and Analysis of Popular Music 4(3-2)  
MUS 209 - Digital Music Production 3(3-0)  
MUS 309 - Electroacoustic Music 3(3-0)

#### Required Courses II (12 hours)

BCA 222 - Audio Production 3(1-4)  
BCA 421 - Advanced Audio Production 3(2-2)  
BCA 540WI - Recording Industry and Business 3(3-0)  
BCA 542 - Contemporary Recording and Mixing 3(2-2)

#### Required Courses III (12 hours)

BUS 100 - Introduction to Business 3(3-0)  
ENT 200 - Introduction to Entrepreneurship 3(3-0)  
ENT 301 - Innovation & Entrepreneurship 3(3-0)  
ENT 495 - Venture Development 3(3-0)

#### Electives (9 hours)

Select 9 hours from the following:  
BCA 211WI - Writing for Multimedia 3(3-0)  
BCA 265QR - Understanding Media Measurement 3(3-0)  
BCA 332 - Multi-Platform Media Production 3(2-2)  
BCA 522 - Audio Post-Production 3(2-2)  
ENT 300 - Digital Entrepreneurship 3(3-0)  
ENT 320 - Financial Concepts and Entrepreneurial Ventures 3(3-0)  
MKT 340 - Personal Selling 3(3-0)  
MUS 116 - Music and Cartoons: Warner Brothers to Disney 3(3-0)  
MUS 213 - Jazz: An American Art Form 3(3-0)  
MUS 306 - Songwriting I 3(3-0)  
MUS 406 - Songwriting II 3(3-0)

**Total: 47 semester hours**

## Bachelor of Fine Arts Degree

### Music Theatre Major

*B.F.A. Degree*

This is an interdisciplinary major. Please check the index for the page number.

### Song Writing Minor

*B.A., B.A.A., B.S., B.Mus., B.F.A. degrees*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Any student in good academic standing at CMU may sign a minor in Songwriting. Every student intending to minor in Songwriting must meet with an advisor to specify the course of study. A minimum 2.5 GPA must be earned in the minor.

#### Required Courses I (8 hours)

MUS 101 - Fundamentals of Music Theory 4(3-2)  
MUS 102 - Theory and Analysis of Popular Music 4(3-2)

#### Required Courses II (9 hours)

MUS 209 - Digital Music Production 3(3-0)  
MUS 306 - Songwriting I 3(3-0)  
MUS 406 - Songwriting II 3(3-0)

#### Required Courses III (2 hours)

Select 2 hours from the following:  
MUS 107 - The Craft of Composition 2(2-0)  
MUS 141 - Vocal Techniques I 1(0-2)  
MUS 142 - Vocal Techniques II 1(0-2)  
MUS 147 - Piano Class I 1(0-2)  
MUS 148 - Piano Class II 1(0-2)  
MUS 149 - Class Guitar 1(0-2)  
MUS 247 - Piano Class III 1(0-2)

#### Required Courses IV (3 hours)

Select 3 hours from the following:  
ART 125 - Digital Design 3(0-6)  
BCA 222 - Audio Production 3(1-4)  
BCA 540WI - Recording Industry and Business 3(3-0)  
ENG 294WI - Introduction to Creative Writing 3(3-0)  
ENT 200 - Introduction to Entrepreneurship 3(3-0)  
MUS 304 - Instrumentation and Scoring 3(2-2)  
MUS 305 - Choral Arranging 3(3-0)

**Total: 22 semester hours**

## Theatre and Dance (TAI, DAN)

For information, please contact the TAD office, 133 Moore Hall; 989-774-7710  
<https://www.cmich.edu/academics/colleges/college-arts-media/departments-schools/theatre-dance>

### Why Study Theatre and Dance?

The ability to communicate well, crucial to all of our activities, is developed through informed and careful study in the disciplines of Theatre and Dance. Among the many areas of study are: theatre performance (including dramatic, musical and narrative theatre), theatre design and technology, and dance studies, techniques and choreography.

### Theatre and Dance at CMU

The Department of Theatre and Dance engages undergraduates through scholarly inquiry, performance and production in an understanding of, appreciation for and experience with the dynamic, complex interaction between texts, artists and audiences and promotes awareness of the cultural environments and communities in which these elements interact. To these ends, the Department of Theatre and Dance strives to: (1) provide students with a foundation for the breadth and depth of study in the fields of theatre, interpretation and dance; (2) encourage a balance between learning by doing (performance and production) and by academic scholarship; (3) afford opportunities for all students to become involved in coursework and/or production regardless of their pre-professional or avocational interests; and (4) create a life-long interest in and appreciation for the importance of the arts in the well-being of the individual and larger society within which they function. For more information about Theatre and Dance programs, contact the Department of Theatre and Dance.

### The faculty

Steven Berglund (Chair), Ricky Clarkson, Paul Collins, Ann Dasen, Dan Daugherty, Elaine Daugherty, Nancy Eddy, Stephen Harrick, Patrick Julian, Stacey Pattison, Jody Price, Andrea Purrenhage, Damian Sanderson, Keeley Stanley-Bohn, Daniel Thieme-Whitlow, Annette Thornton, Heather Trommer-Beardslee

## Theatre and Interpretation Majors and Minors

### Theatre & Interpretation Major: Design/ Technical Theatre Concentration

*B.F.A. degree*

The curriculum leading to the Bachelor of Fine Arts degree is designed for individuals who qualify for and are admitted to intensive specialization in Design/Technical Theatre. Students who wish to enter the B.F.A. program must consult with a TID technical theatre advisor.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Admission to the BFA Design/Technical Theatre program requires a formal interview with Theatre Design and Technical Theatre Advisors. Contact the department for criteria and information about the interview process.

A minimum 2.5 GPA must be earned in the major. Students enrolled in the BFA Design/Technical Theatre concentration will have a portfolio review with the TAD Design and Technical Theatre advisors at the end of each spring semester in order to continue the program. The student is required to demonstrate proficiency in the field of specialization prior to graduation.

#### Core Courses I (36 hours)

TAI 177 - Stagecraft and Stage Lighting 3(0-6)  
 TAI 180 - First-Year Theatre Seminar 2(2-0)  
 TAI 182 - Acting I 3(3-0)  
 TAI 278 - Stage Makeup 3(2-2)  
 TAI 280 - Script Analysis 3(3-0)  
 TAI 350QR - Costume Fundamentals 3(3-0)  
 TAI 460 - BFA Capstone Project 3(0-6)  
 TAI 476 - Lighting Design 3-6(Spec)

TAI 477 - Scene Design 3-6(Spec)  
 TAI 499 - Senior Theatre Seminar 1(1-0)  
 TAI 574 - History of Drama and Theatre I 3(3-0)  
 TAI 575 - History of Drama and Theatre II 3(3-0)  
 TAI 579 - Costume Design and Construction 3(3-0)

#### Core Courses II (4 hours)

Select 4 hours from the following:

TAI 309 - Studio: Stage Management 1-4(Spec)  
 TAI 310 - Studio: Sound 1-4(Spec)  
 TAI 311 - Studio: Properties 1-4(Spec)  
 TAI 312 - Studio: Scenery Construction and Rigging 1-4(Spec)  
 TAI 313 - Studio: Scenery Design 1-4(Spec)  
 TAI 314 - Studio: Lighting 1-4(Spec)  
 TAI 315 - Studio: Lighting Design 1-4(Spec)  
 TAI 316 - Studio: Technical Direction 1-4(Spec)  
 TAI 317 - Studio: Costuming 1-4(Spec)  
 TAI 318 - Studio: Wardrobe Management 1-4(Spec)  
 TAI 319 - Studio: Makeup 1-4(Spec)  
 TAI 322 - Studio: Costume Design 1-4(Spec)

#### Core Courses III (15 hours)

Select 15 hours of TAI courses in consultation with a TID Technical Theatre Advisor.

#### Electives (15 hours)

Select 15 hours of elective cognate courses. Cognate courses may be chosen from TAI, ART, BCA, IET, FMD, IND or others. All courses in this section must be selected in consultation with a TID technical theatre advisor.

**Total: 70 semester hours**



## Theatre & Interpretation Major: Acting/ Directing Concentration

*B.F.A. degree*

The curriculum leading to the Bachelor of Fine Arts degree is designed for individuals who qualify for and are admitted to intensive specialization in Acting/Directing. Students who wish to enter the B.F.A. program must consult with a Theatre and Dance advisor.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Admission to the BFA Acting program is by audition only. Criteria and information about the audition process may be found at <https://www.cmich.edu/colleges/cam/tad/About/Pages/BFA-Acting-Auditions.aspx>.

A minimum 2.5 GPA must be earned in the major. The student is also required to demonstrate proficiency in the field of specialization prior to graduation.

### Core Courses I (48 hours)

TAI 177 - Stagecraft and Stage Lighting 3(0-6)  
TAI 180 - First-Year Theatre Seminar 2(2-0)  
TAI 182 - Acting I 3(3-0)  
TAI 278 - Stage Makeup 3(2-2)  
TAI 280 - Script Analysis 3(3-0)  
TAI 282 - Acting II 3(3-0)  
TAI 300 - Improvisation 3(2-2)  
TAI 302 - Voice and Diction 3(3-0)  
TAI 378 - Stage Combat 3(2-2)  
TAI 381 - Directing 3(3-0)  
TAI 382 - Acting III 3(3-0)  
TAI 383 - Voice for the Actor 3(3-0)  
TAI 384 - Movement for the Actor 3(3-0)  
TAI 385 - Audition Techniques 3(3-0)  
TAI 460 - BFA Capstone Project 3(0-6)  
TAI 499 - Senior Theatre Seminar 1(1-0)  
TAI 581 - Advanced Directing 3(3-0)

### Core Courses II (3 hours)

#### Studio Courses

Select 3 hours total from one or both of the following:

TAI 305 - Studio: Acting/Performance 1-4(Spec)  
TAI 306 - Studio: Directing 1-4(Spec)

### Core Courses III (1 hour)

Select 1 hour from the following:

TAI 309 - Studio: Stage Management 1-4(Spec)  
TAI 310 - Studio: Sound 1-4(Spec)  
TAI 311 - Studio: Properties 1-4(Spec)  
TAI 312 - Studio: Scenery Construction and Rigging 1-4(Spec)  
TAI 313 - Studio: Scenery Design 1-4(Spec)  
TAI 314 - Studio: Lighting 1-4(Spec)  
TAI 315 - Studio: Lighting Design 1-4(Spec)  
TAI 316 - Studio: Technical Construction 1-4(Spec)  
TAI 317 - Studio: Costuming 1-4(Spec)  
TAI 318 - Studio: Wardrobe Management 1-4(Spec)  
TAI 319 - Studio: Makeup 1-4(Spec)

### Core Courses IV (6 hours)

TAI 574 - History of Drama and Theatre I 3(3-0)  
TAI 575 - History of Drama and Theatre II 3(3-0)

### Core Courses V (3 hours)

Select one of the following:

TAI 380 - Musical Theatre History 3(3-0)  
TAI 399 - Theatre and the Holocaust 3(3-0)  
TAI 569 - History of American Theatre 3(3-0)  
TAI 578 - Special Topics in Theatre 1-9(Spec)  
TAI 580 - Dramatic Theory and Criticism 3(3-0)  
TAI 583 - Women in the Contemporary American Theatre 3(3-0)  
TAI 587 - Irish Theatre and Drama 3(3-0)  
TAI 588 - Contemporary Theatre 3(3-0)

### Electives (9 hours)

Select an additional 9 hours of approved cognate classes approved by the student's Theatre and Dance advisor.

**Total: 70 semester hours**

## Theatre and Interpretation Major

*B.A. degree, B.A.A. degree, or B.S. degree*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Any student in good academic standing at CMU may declare a major in Theatre and Interpretation. Every student intending to major in Theatre and Interpretation must meet with an advisor to specify the course of study. A minimum 2.0 GPA (C) must be earned in the major.

### Core Courses I (18 hours)

TAI 170 - Oral Interpretation of Literature 3(3-0)  
TAI 177 - Stagecraft and Stage Lighting 3(0-6)  
TAI 180 - First-Year Theatre Seminar 2(2-0)  
TAI 182 - Acting I 3(3-0)  
TAI 278 - Stage Makeup 3(2-2)  
TAI 280 - Script Analysis 3(3-0)  
TAI 499 - Senior Theatre Seminar 1(1-0)

**Note:** TAI 170 also counts for UP Group I-B.

### Core Courses II (3 hours)

#### Theatre History and Literature

Select 3 hours from the following:

TAI 574 - History of Drama and Theatre I 3(3-0)  
TAI 575 - History of Drama and Theatre II 3(3-0)

**Note:** TAI 574 or 575 can be counted for elective options below but may only be counted once for this major.

### Electives I (3 hours)

#### Theatre History and Literature

Select 3 hours from the following:

TAI 377 - Costuming I 3(3-0)  
TAI 380 - Musical Theatre History 3(3-0)  
TAI 399 - Theatre and the Holocaust 3(3-0)  
TAI 569 - History of American Theatre 3(3-0)  
TAI 574 - History of Drama and Theatre I 3(3-0)  
TAI 575 - History of Drama and Theatre II 3(3-0)  
TAI 583 - Women in the Contemporary American Theatre 3(3-0)  
TAI 586WI - Playwriting 3(3-0)  
TAI 588 - Contemporary Theatre 3(3-0)

### Electives II (9 hours)

#### Intermediate Electives

Select 9 hours from the following:

TAI 178 - Special Topics in Theatre 3-9(Spec)  
TAI 277 - Stage Management 3(3-0)  
TAI 282 - Acting II 3(3-0)  
TAI 300 - Improvisation 3(2-2)  
TAI 302 - Voice and Diction 3(3-0)  
TAI 352 - Music Theatre Scene Study 3(1-2)  
TAI 371 - Readers Theatre 3(3-0)  
TAI 373 - Oral Interpretation for Children 3(3-0)  
TAI 376 - Interpretation of Drama 3(3-0)  
TAI 377 - Costuming I 3(3-0)  
TAI 378 - Stage Combat 3(2-2)  
TAI 379 - Acting for the Camera 3(3-0)  
TAI 380 - Musical Theatre History 3(3-0)  
TAI 381 - Directing 3(3-0)  
TAI 383 - Voice for the Actor 3(3-0)  
TAI 384 - Movement for the Actor 3(3-0)  
TAI 385 - Audition Techniques 3(3-0)  
TAI 399 - Theatre and the Holocaust 3(3-0)  
TAI 476 - Lighting Design 3-6(Spec)  
TAI 477 - Scene Design 3-6(Spec)  
TAI 478 - Theatre Management 3(3-0)  
TAI 569 - History of American Theatre 3(3-0)  
TAI 574 - History of Drama and Theatre I 3(3-0)  
TAI 575 - History of Drama and Theatre II 3(3-0)  
TAI 579 - Costume Design and Construction 3(3-0)  
TAI 583 - Women in the Contemporary American Theatre 3(3-0)  
TAI 585 - Creative Dramatics 3(2-2)  
TAI 586WI - Playwriting 3(3-0)  
TAI 588 - Contemporary Theatre 3(3-0)

### Notes:

TAI 399 also counts for UP Group IV-B.

TAI 178, 476, 477 may only count for 3 credits (each).

**Electives III (3 hours)***Advanced Electives*

Select 3 hours from the following:

- TAI 382 - Acting III 3(3-0)
- TAI 452 - Music Theatre Performance 3(2-2)
- TAI 518 - Advanced Make-up 3(2-2)
- TAI 570 - Oral Interpretation of Prose Fiction 3(3-0)
- TAI 571 - Oral Interpretation of Poetry 3(3-0)
- TAI 573 - Seminar: Interpretative Reading 3(3-0)
- TAI 577 - Special Topics in Technical Theatre 1-9(Spec)
- TAI 578 - Special Topics in Theatre 1-9(Spec)
- TAI 580 - Dramatic Theory and Criticism 3(3-0)
- TAI 581 - Advanced Directing 3(3-0)
- TAI 587 - Irish Theatre and Drama 3(3-0)
- TAI 590 - Summer Repertory Theatre 3(3-0)

**Electives IV (4 hours)***Theatre Studio Electives*

Select 4 hours from the following. No course may be repeated for more than 2 hours.

- TAI 305 - Studio: Acting/Performance 1-4(Spec)
- TAI 306 - Studio: Directing 1-4(Spec)
- TAI 307 - Studio: Movement 1-4(Spec)
- TAI 308 - Studio: Script Creation 1-4(Spec)
- TAI 309 - Studio: Stage Management 1-4(Spec)
- TAI 310 - Studio: Sound 1-4(Spec)
- TAI 311 - Studio: Properties 1-4(Spec)
- TAI 312 - Studio: Scenery Construction and Rigging 1-4(Spec)
- TAI 313 - Studio: Scenery Design 1-4(Spec)
- TAI 314 - Studio: Lighting 1-4(Spec)
- TAI 315 - Studio: Lighting Design 1-4(Spec)
- TAI 316 - Studio: Technical Direction 1-4(Spec)
- TAI 317 - Studio: Costuming 1-4(Spec)
- TAI 318 - Studio: Wardrobe Management 1-4(Spec)
- TAI 319 - Studio: Makeup 1-4(Spec)
- TAI 320 - Studio: Theatre Management 1-4(Spec)
- TAI 321 - Studio: Dramaturgy 1-4(Spec)

**Electives V (3 hours)**

Select 3 hours of TAI courses in consultation with an advisor. Courses can be chosen from electives above but may only count once on the major.

**Total: 43 semester hours**

**Music Theatre Major***B.F.A. Degree*

This is an interdisciplinary major. Please check the index for the page number.

**Theatre and Interpretation Minor***B.A. degree, B.A.A. degree, or B.S. degree***Required Courses I (3 hours)***General Knowledge of Theatre*

- TAI 175WI - The Art of Theatre: From "Hamlet" to "Hamilton" 3(3-0)

**Required Courses II (3 hours)***Performance*

Select one of the following:

- TAI 170 - Oral Interpretation of Literature 3(3-0)
- TAI 182 - Acting I 3(3-0)
- TAI 302 - Voice and Diction 3(3-0)

**Required Courses III (3 hours)***Theatre Technology*

Select one of the following:

- TAI 177 - Stagecraft and Stage Lighting 3(0-6)
- TAI 278 - Stage Makeup 3(2-2)

**Required Courses IV (3 hours)***Dramatic Literature & Criticism*

Select one of the following:

- TAI 380 - Musical Theatre History 3(3-0)
- TAI 399 - Theatre and the Holocaust 3(3-0)
- TAI 569 - History of American Theatre 3(3-0)
- TAI 574 - History of Drama and Theatre I 3(3-0)
- TAI 575 - History of Drama and Theatre II 3(3-0)
- TAI 583 - Women in the Contemporary American Theatre 3(3-0)
- TAI 587 - Irish Theatre and Drama 3(3-0)
- TAI 588 - Contemporary Theatre 3(3-0)

**Required Courses V (1 hour)***Theory to Practice*

Select one Studio Course (TAI 305 through 321) for 1 hour:

**Electives (12 hours)**

Select 12 credits of TAI electives at 200-level or higher.

**Total: 25 semester hours**

## Dance Major and Minor

### Dance Studies Major

*B.A.A. degree*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Any student in good academic standing at CMU may sign a major in Dance Studies. Every student intending to major in Dance Studies must meet with an advisor to specify the course of study.
2. A minimum of 2.5 GPA must be earned in the major.
3. Students must minor in Nonprofit Leadership and Service, Business, or Entrepreneurship.
4. Each academic year, CMU Dance Studies Majors are required to audition and participate as a dancer in the Department of Theatre and Dance Student Choreography Showcase and the University Theatre Dance Company Concert (if offered a role after UTDC auditions).

#### Required Courses I (25 hours)

DAN 109 - World Dance 2-6(Spec)  
 DAN 175 - Dance Appreciation 3(3-0)  
 DAN 232 - Dance Composition I 2(2-0)  
 DAN 305 - Studio: Dance Performance 1-4(Spec)  
 DAN 430 - Dance Production 3(3-0)  
 DAN 530 - History of Dance 3(3-0)  
 DAN 540 - Dance Studies Internship 6(Spec)  
 DAN 541 - Senior Capstone 3(3-0)

**Note:** Take 2 hours of DAN 109 and 1 hours of DAN 305. In addition, take 2 technical theatre studio courses in different areas.

#### Required Courses II (13 hours)

Select 13 hours from the courses below in consultation with your advisor:

DAN 231 - Fundamental Movement 2(2-0)  
 DAN 242 - Writing About Dance 3(3-0)  
 DAN 243 - Dance and Technology 2(1-2)  
 DAN 251 - Performing Arts Administration 3(3-0)  
 DAN 332 - Dance Composition II 3(3-0)  
 DAN 341 - Methods of Teaching Dance 3(3-0)  
 DAN 342 - Screendance 3(3-0)  
 DAN 343 - Dance Composition for Music Theatre 3(3-0)  
 DAN 480 - Dance Practicum 1-3(Spec)  
 DAN 494 - Field Study in Dance 1-3(Spec)  
 DAN 578 - Special Topics in Dance 1-9(Spec)  
 TAI 177 - Stagecraft and Stage Lighting 3(0-6)

**Note:** No more than 3 hours of DAN 578 may be counted toward the Dance Studies Major.

#### Required Courses III (14 hours)

Select 14 hours from the technical courses below in consultation with your advisor.

DAN 126 - Hip Hop 2(1-2)  
 DAN 133 - Modern I 2(1-2)  
 DAN 136 - Ballet I 2(1-2)  
 DAN 137 - Tap I 2(1-2)  
 DAN 138 - Jazz I 2(1-2)  
 DAN 226 - Hip Hop II 2-6(Spec)  
 DAN 233 - Modern II 2-6(Spec)  
 DAN 236 - Ballet II 2-6(Spec)  
 DAN 237 - Tap II 2-6(Spec)  
 DAN 238 - Jazz II 2-6(Spec)  
 DAN 326 - Hip Hop III 2-6(Spec)  
 DAN 333 - Modern III 2-6(Spec)  
 DAN 336 - Ballet III 2-6(Spec)  
 DAN 337 - Tap III 2-6(Spec)  
 DAN 338 - Jazz III 2-6(Spec)

**Total: 52 semester hours**

### Dance Minor

*B.A. degree or B.S. degree*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students electing a dance minor must consult an advisor prior to beginning their program.

#### Core Courses I (12 hours)

DAN 175 - Dance Appreciation 3(3-0)  
 DAN 232 - Dance Composition I 2(2-0)  
 DAN 305 - Studio: Dance Performance 1-4(Spec)  
 DAN 430 - Dance Production 3(3-0)  
 DAN 530 - History of Dance 3(3-0)

#### Core Courses II (1 hour)

Select one TAI studio course in one of the following areas of technical theatre for a faculty-supervised theatre production or for a faculty-supervised dance concert.

TAI 309 - Studio: Stage Management 1-4(Spec)  
 TAI 310 - Studio: Sound 1-4(Spec)  
 TAI 311 - Studio: Properties 1-4(Spec)  
 TAI 312 - Studio: Scenery Construction and Rigging 1-4(Spec)  
 TAI 313 - Studio: Scenery Design 1-4(Spec)  
 TAI 314 - Studio: Lighting 1-4(Spec)  
 TAI 315 - Studio: Lighting Design 1-4(Spec)  
 TAI 316 - Studio: Technical Direction 1-4(Spec)  
 TAI 317 - Studio: Costuming 1-4(Spec)  
 TAI 318 - Studio: Wardrobe Management 1-4(Spec)  
 TAI 319 - Studio: Makeup 1-4(Spec)

#### Electives (12 hours)

Select any 12 hours in the following technique classes:

DAN 126 - Hip Hop 2(1-2)  
 DAN 133 - Modern I 2(1-2)  
 DAN 136 - Ballet I 2(1-2)  
 DAN 137 - Tap I 2(1-2)  
 DAN 138 - Jazz I 2(1-2)  
 DAN 226 - Hip Hop II 2-6(Spec)  
 DAN 233 - Modern II 2-6(Spec)  
 DAN 236 - Ballet II 2-6(Spec)  
 DAN 237 - Tap II 2-6(Spec)  
 DAN 238 - Jazz II 2-6(Spec)  
 DAN 326 - Hip Hop III 2-6(Spec)  
 DAN 333 - Modern III 2-6(Spec)  
 DAN 336 - Ballet III 2-6(Spec)  
 DAN 337 - Tap III 2-6(Spec)  
 DAN 338 - Jazz III 2-6(Spec)

**Total: 25 semester hours**

# College of Business Administration

**Christopher R. Moberg, D.B.A., Dean**  
**Karl Smart, Ph.D., Associate Dean**  
**250 Grawn Hall; 989-774-3337**  
**[www.cba.cmich.edu](http://www.cba.cmich.edu)**

**Associated Designators: BUS, MBA**

## College Mission

Our mission is to prepare students for professional success by providing an innovative, high quality, business-connected education that inspires students to excel in diverse global environments. Our degree programs reflect our dedication to provide active student learning that develops the knowledge and skills necessary for student success. The college encourages this environment beyond the classroom through active professional student organizations and strong student support services. Business students are encouraged to seek meaningful experiences in the business community and to willingly adapt to the rapidly changing business environment.

The College of Business Administration offers undergraduate and graduate degree programs that are professionally accredited by the Association to Advance Collegiate Schools of Business (AACSB International). The accreditation assures quality business programs and the ability to attract excellent faculty with extensive professional teaching experience. AACSB International is the premier accrediting agency for bachelor's and master's degree programs in business administration and accounting.

## Areas of Study

The College of Business Administration offers the Bachelor of Science in Business Administration degree (B.S.B.A.). Some programs are available on other degrees, such as: an Entrepreneurship major on the B.A.A. degree; an Economics major on the B.S. or B.A. degree, and a Law and Economics Major on the B.S. or B.A. degree. The Master of Business Administration graduate degree is available within the College of Business Administration. Other graduate programs within the College of Business include the Master of Science in Information Systems, and a Master of Arts in Economics. Requirements for these degrees are described in the Graduate Studies Bulletin.

Students interested in a business major and/or minor should contact Business Student Services in Grawn 113 during their first semester at Central Michigan University. This office provides academic advising for business majors and minors.

Your education in the College of Business Administration not only provides the skills you need for your first job, but also is committed to instilling in you the desire to remain current in your field for the rest of your career. Our graduates have successfully advanced to become business, government, and community leaders.

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## ADMISSION, RETENTION & TERMINATION STANDARDS

### Bachelor of Science in Business Administration (B.S.B.A.)

Students with an interest in business will complete an application during New Student Orientation. This application will be reviewed each semester to monitor progress toward admission to the Bachelor of Science in Business Administration (B.S.B.A.) degree in the College of Business Administration.

See page 120 for Admission Requirements to the B.S.B.A. degree.

Majors include:

Accounting Major  
 Economics Major  
 Finance Major  
 General Business Administration Major: Applied Business  
     Communication Concentration  
 General Management Major  
 Hospitality Services Administration Major: Hospitality Services  
     Concentration  
 Human Resources Management Major  
 Information Systems Major  
 International Business Major  
 Law and Economics Major  
 Logistics Management Major  
 Marketing Major - General  
 Marketing Major - Professional Sales Concentration  
 Personal Financial Planning Major  
 Purchasing & Supply Management Major  
 Real Estate: Development and Finance Major

### Additional Information:

Students must earn admission to the B.S.B.A. degree to enroll in most courses on their major. When admission is listed as a prerequisite for a course, having a course listed on a declared major or minor does not waive the admission prerequisite for B.S.B.A. degree earners.

### Other Degree Programs:

Some business programs are available on other CMU degrees. They include: Economics Major on the B.A. or B.S. degrees, the Entrepreneurship Major on the B.A.A. degree, and the Law and Economics major on the B.A. or B.S. degrees.

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## Interdepartmental and Interdisciplinary Majors and Minors

### Interdepartmental

#### International Business Major

*B.S. in B.A. degree*

Advisor: Assigned by the Department of Management (989-774-3193)

##### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in International Business: See an advisor in the Department of Management.

1. To register for most of the courses on the major, students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.
2. Courses taken on a Credit/No Credit basis are not accepted on management department majors.
3. At least 15 credit hours of the required elective coursework of the major must be taken in the accredited AACSB Program at CMU.

##### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)

MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

##### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)

BUS 503QR - Applied Lean Six Sigma 3(3-0)

##### Required Courses I (9 hours)

MGT 360 - Managing Cultural Differences and Diversity in a Global Economy 3(3-0)

MGT 365 - International Business 3(3-0)

MGT 457 - Seminar in International Business 3(3-0)

##### Required Courses II (6 hours)

Select two (2) courses from the following:

BLR 565 - The International Legal Environment of Business 3(3-0)

ECO 372 - International Economics 3(3-0)

FIN 573 - International Finance 3(3-0)

HSA 542 - International Tourism 3(3-0)

MGT 400 - Global Concepts for Sustainable Development 3(Spec)

MKT 560 - International Marketing 3(3-0)

##### Foreign Language Requirement (6 hours)

Select hours at the 300 level or higher in a foreign language taught at CMU. Foreign students with native language different from English may substitute MGT or other appropriate courses subject to the approval of the major advisor.

##### Electives (6 hours)

You must earn at least 3 credits in study-abroad, with international emphasis, international work experience, or completion of a comprehensive research project with international emphasis. If only 3 credit hours are earned abroad, select one of the following:

ANT 370/SOC 370 - Global Environmental Issues 3(3-0)

BIS 260WI - Global Business Communication 3(3-0)

ECO 380 - Comparative Economic Systems 3(3-0)

ECO 381 - Patterns of Economic Development 3(3-0)

FRN 335 - French for the Professions 3(3-0)

GEO 121 - Human Geography and Globalization 3(3-0)

GEO 317 - Economic Geography 3(3-0)

GEO 345 - Political Geography 3(3-0)

GEO 346 - Geography of the Developing World 3(3-0)

GER 335 - The Culture of the German Economy 3(3-0)

GER 336 - The Culture of German Business 3(3-0)

HST 202 - World History since 1400 3(3-0)

PSC 150 - Introduction to International Relations 3(3-0)

PSC 351 - International Relations 3(3-0)

PSC 555 - International Law I 3(3-0)

REL 101 - World Religions: An Introduction to the Study of Religion 3(3-0)

SPN 335 - Spanish for Business 3(3-0)

**Total: 36 semester hours**

### Interdepartmental

#### Law and Economics Major

*B.A. degree or B.S. degree*

The Law and Economics major combines the elements of both disciplines - the analytical and decision-making framework provided by economic theory as well as the reasoning and argumentation skills of business law. The modern manager faces legal implications of decision-making in daily operations and in formulating business strategy. Business law courses provide the student with insight into legal institutions, the nature of legal language, the regulatory environment and the legal principles pertaining to property rights, contracts, business organization and commercial relationships. The economic content features the use of problem-solving techniques to develop analytical decision-making skills. Students will gain an appreciation of the preservation of individual rights and methods to evaluate the efficiency of the legal system.

The major is intended for students preparing for a career in the legal profession or those seeking a legal emphasis within their business or liberal arts studies. A student planning to attend law school will receive valuable information on the use of economics in legal applications. A working knowledge of these basic issues also benefits others, e.g. expert witnesses routinely use economic concepts in testimonies.

Contact either the Finance and Law Department or the Economics Department for the names of advisors.

##### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Up to 6 hours may be taken as Credit/No Credit and counted towards the major.
2. Students are strongly advised to select elective courses in consultation with an Economics or Finance & Law Department advisor.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

##### Required Courses (21 hours)

BLR 202 - Legal Environment of Business 3(3-0)

BLR 302 - Law of Agreements 3(3-0)

BLR 350/ECO 350 - Law and Economics 3(3-0)

BLR 410 - Regulatory Law 3(3-0)

ECO 201 - Principles of Macroeconomics 3(3-0)

ECO 202 - Principles of Microeconomics 3(3-0)

ECO 365 - Intermediate Microeconomic Theory 3(3-0)

##### Electives (12 hours)

###### Electives I - Economics (6 hours)

6 hours of electives in Economics at the 300-level or above in addition to the required courses.

###### Electives II - Business Law and Regulation (6 hours)

6 hours from any BLR course 300-level or above in addition to the required courses, excluding BLR 365.

**Total: 33 semester hours**

### Interdepartmental

#### Law and Economics Major

*B.S.B.A. degree*

The Law and Economics major combines the elements of both disciplines - the analytical and decision-making framework provided by economic theory as well as the reasoning and argumentation skills of business law. The modern manager faces legal implications of decision-making in daily operations and in formulating business strategy. Business law courses provide the student with insight into legal institutions, the nature of legal language, the regulatory environment and the legal principles pertaining to property rights, contracts, business organization and commercial relationships. The economic content features the use of problem-solving techniques to develop analytical decision-making skills. Students will gain an appreciation of the preservation of individual rights and methods to evaluate the efficiency of the legal system.

The major is intended for students preparing for a career in the legal profession or those seeking a legal emphasis within their business or liberal arts studies. A student planning to attend law school will receive valuable information on the use of economics in legal applications. A working knowledge of these basic issues also benefits others, e.g. expert witnesses routinely use economic concepts in testimonies.

Contact either the Finance and Law Department or the Economics Department for the names of advisors.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A student must first be admitted to the Bachelor of Science in Business Administration (BSBA). See the B.S.B.A. degree for details.
2. Up to 6 hours may be taken as Credit/No Credit and counted towards the major.
3. Students are strongly advised to select elective courses in consultation with an Economics or Finance & Law Department advisor

#### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)  
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

#### Common Body of Knowledge Courses II (3 hours)

Select one of the following:  
BUS 351QR - Applied Business Analytics 3(3-0)  
BUS 503QR - Applied Lean Six Sigma 3(3-0)

#### Required Courses (12 hours)

BLR 302 - Law of Agreements 3(3-0)  
BLR 350/ECO 350 - Law and Economics 3(3-0)  
BLR 410 - Regulatory Law 3(3-0)  
ECO 365 - Intermediate Microeconomic Theory 3(3-0)

#### Electives (12 hours)

##### Electives I - Economics (6 hours)

6 hours of electives in Economics at the 300-level or above in addition to the required courses.

##### Electives II - Business Law and Regulation (6 hours)

6 hours from any BLR course 300-level or above in addition to the required courses, excluding BLR 365.

**Total: 33 semester hours**

*Interdepartmental*

## Purchasing and Supply Management Major

*B.S.B.A. degree*

This major is only available to students admitted to the College of Business Administration. This major can be signed by a designated faculty in either the Management department or the Marketing, Hospitality, and Logistics departments

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. To register for most of the courses on the major students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.
2. Courses taken on a credit/no credit basis are not accepted on the Purchasing and Supply Management Major.
3. At least 15 credit hours of the required and elective course work of the major must be taken in the accredited AACSB Program at CMU.

#### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)  
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

#### Common Body of Knowledge Courses II (3 hours)

Select one of the following:  
BUS 351QR - Applied Business Analytics 3(3-0)  
BUS 503QR - Applied Lean Six Sigma 3(3-0)

#### Required Courses (15 hours)

MGT 333 - Purchasing Management 3(3-0)  
MGT 533 - Purchasing Strategy 3(3-0)  
MGT 542 - Inventory and Materials Management 3(3-0)  
MKT 255 - Introduction to Logistics and Physical Distribution 3(3-0)  
MKT 431 - Logistics Operations 3(3-0)

#### Electives (9 hours)

Select from the following:

ACC 321 - Managerial Cost Accounting 3(3-0)  
MGT 335 - Introduction to Management Science 3(3-0)  
MGT 365 - International Business 3(3-0)  
MGT 442 - Computer Applications for Production Operations Management 3(3-0)  
MGT 490 - Internship in Management 1-6(Spec)  
MGT 543 - Management and Control of Quality 3(3-0)  
MGT 545 - Operations Strategy 3(3-0)  
MKT 305 - Buyer Behavior 3(3-0)  
MKT 340 - Personal Selling 3(3-0)  
MKT 432 - Logistics Strategy 3(3-0)  
MKT 465 - Supply Chain Management 3(3-0)  
MKT 490 - Internship in Marketing/Logistics 3-6(Spec)  
MKT 555 - Market and Sales Forecasting 3(3-0)  
MKT 560 - International Marketing 3(3-0)

**Note:** You may count 3 hours of either MGT 490 or MKT 490, not both.

**Total: 33 semester hours**

## Minors

The College of Business Administration also offers specialized minors in certain departments. See the individual departmental sections for the requirements for these specialized minors.

*Interdepartmental*

## Business Administration Minor

*B.A. degree, B.A.A. degree; B.F.A. degree; or B.S. degree*

The Business Administration minor is available to students pursuing non-teaching degrees outside the College of Business Administration. The minor provides a broad background in business for students from other disciplines.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Business Administration: See an advisor in Business Student Services, Grawn 113, 989-774-3124 after declaring your major.

This minor is NOT available to students seeking the Bachelor of Science in Business Administration degree.

No more than a total of 27 hours of credit earned in business courses may be counted toward graduation. These hours include all business transfer credits from other colleges and/or universities and credits earned at Central Michigan University. To determine your qualifications, contact Business Student Services.

#### Required Courses (24 hours)

ACC 201 - Concepts of Financial Accounting 3(3-0)  
ACC 202 - Concepts of Managerial Accounting 3(3-0)  
BIS 221 - Computers In Business I 3(3-0)  
BLR 202 - Legal Environment of Business 3(3-0)  
ECO 201 - Principles of Macroeconomics 3(3-0)  
FIN 332 - Managerial Finance 3(3-0)  
MGT 312 - Introduction to Management 3(3-0)  
MKT 300 - Introduction to Marketing 3(3-0)

**Total: 24 semester hours**

## Accounting (ACC)

For information, please contact the chairperson, 989-774-3796, 312 Grawn Hall;  
<https://www.cmich.edu/academics/colleges/college-business-administration/departments-schools/school-of-accounting>

### Why Study Accounting?

Accounting is the one degree that provides you with the education needed to succeed in every aspect of the business world. It is one of the courses to study at the university that enables a student to enter a profession upon graduation. It also prepares students to obtain their certification in public accounting (CPA), management accounting (CMA) and internal auditing (CIA) upon graduation.

Because accounting is the international language of business, it is a versatile degree that offers a wide range of career opportunities to graduates. Accountants have titles like Chief Executive Officer, Chief Financial Officer, Managing Partner, and Controller. They work for national and international business firms, government agencies, non-profit organizations and in their own companies. Many work in certified public accounting (CPA) firms providing management consulting services, auditing services, personal and financial planning and tax services. Others are hired as part of the management team to work in the finance and operations area of a company. Some are hired to manage the revenues of federal, state, and local governmental agencies and non-profit organizations.

### Accounting at CMU

The primary purpose of the School of Accounting is to prepare students for professional careers in public accounting, corporate accounting, nonprofit entities, and other organizations. The mission of the School of Accounting is to attract quality individuals and to prepare them for successful professional accounting and business careers by providing them innovative, high quality, business-connected accounting programs. We are dedicated to delivering superior value to students: a small college focus on learning, coupled with a professional school experience, at a public university tuition.

The School of Accounting is one of only five programs in Michigan that have earned the prestigious accounting accreditation granted by the AACSB International.

### The Faculty

Judy L. DeWitt, Steven A. Harrast, Gary Hayes, Philip Hong, William C. Hood, Philip L. Kintzele, Vernon E. Kwiatkowski, Kuan-Chen Lin, Debra A. McGilsky, Lori M. Olsen (Chair), Yan Sun, Amy Swaney, Thomas R. Weirich, Edward C. Woelfert

## Accounting Major

*B.S. in B.A. degree*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. To declare a major in Accounting, see an advisor in the School of Accounting. To register for most of the courses on the major students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.
2. At least 18 hours of accounting coursework must be taken at CMU for a major in accounting.
3. Introductory courses in accounting transferred to CMU are accepted for not more than 6 semester hours of credit (equivalent to the hours of ACC 250 and ACC 255 at CMU).
4. No minor is required for accounting majors.
5. The only course available on a Credit/No Credit basis that can be counted toward the accounting major is ACC 489.
6. A maximum of 3 semester hours of credit in accounting courses numbered with the ending digits 80-99 can be counted toward the accounting major.
7. For CPA, CMA, and CIA information, visit the following websites:
  - A. **For CPA licensing:**  
[www.michigan.gov/accountancy](http://www.michigan.gov/accountancy)
  - B. **For the CMA certificate:**  
[www.imanet.org/cma\\_certification.aspx](http://www.imanet.org/cma_certification.aspx)
  - C. **For the CIA certificate:**  
[www.TheIIA.org](http://www.TheIIA.org)

**Note:** Accounting and business electives depend on the student's career objectives and should be chosen in consultation with the student's advisor.

### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)  
 MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)  
 BUS 503QR - Applied Lean Six Sigma 3(3-0)

### Accounting Core (21 hours)

ACC 301 - Intermediate Accounting I 3(3-0)  
 ACC 302 - Intermediate Accounting II 3(3-0)  
 ACC 311 - Federal Income Taxation I 3(3-0)  
 ACC 321 - Managerial Cost Accounting 3(3-0)  
 ACC 370 - Accounting Systems and Controls 3(3-0)  
 ACC 501 - Advanced Accounting 3(3-0)  
 ACC 531 - Auditing and Assurance Services 3(3-0)

**Note:** ACC 311, 321, 370, 501, and 531 are required to take the CPA exam.

### Electives I (6-9 hours)

Select 2 or 3 courses from the following:

ACC 511 - Federal Income Tax II 3(3-0)  
 ACC 512 - Tax Research and Administration 3(3-0)  
 ACC 517 - Federal Estate and Gift Taxation 3(3-0)  
 ACC 521 - Managerial Cost Control Analysis 3(3-0)  
 ACC 536 - Forensic Accounting 3(3-0)  
 ACC 543 - Fund Accounting 3(3-0)  
 ACC 570 - Strategic Accounting System Development and Implementation 3(3-0)  
 ACC 575 - Data Analytics for Accounting 3(3-0)

**Electives II (0-3 hours)**

If only 2 courses are selected from group I above, select one course from the following list:

ACC 489 - Accounting Internship/Co-Op 1-3(Spec)  
 ACC 491 - Independent Studies 1-3(Spec)  
 ACC 597 - Special Topics in Accounting 1-3(Spec)  
 BIS 320 - Systems Analysis and Design 3(3-0)  
 BLR 302 - Law of Agreements 3(3-0)  
 BLR 390 - Law of Enterprise Organization 3(3-0)  
 FIN 442 - Intermediate Financial Management 3(3-0)  
 MGT 335 - Introduction to Management Science 3(3-0)  
 MKT 450 - Marketing Research 3(3-0)

**Total: 39 semester hours**

**Accounting Minor**

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

**Required Courses I (3 hours)**

Select one of the following:

ACC 201 - Concepts of Financial Accounting 3(3-0)  
 ACC 250 - Introduction to Financial Accounting 3(3-0)

**Required Courses II (3 hours)**

Select one of the following:

ACC 202 - Concepts of Managerial Accounting 3(3-0)  
 ACC 255 - Managerial Accounting & Decision Making 3(3-0)

**Required Courses III (12 hours)**

ACC 301 - Intermediate Accounting I 3(3-0)  
 ACC 302 - Intermediate Accounting II 3(3-0)  
 ACC 311 - Federal Income Taxation I 3(3-0)  
 ACC 321 - Managerial Cost Accounting 3(3-0)

**Electives (3 hours)**

Select one of the following:

ACC 501 - Advanced Accounting 3(3-0)  
 ACC 511 - Federal Income Tax II 3(3-0)  
 ACC 512 - Tax Research and Administration 3(3-0)  
 ACC 517 - Federal Estate and Gift Taxation 3(3-0)  
 ACC 521 - Managerial Cost Control Analysis 3(3-0)  
 ACC 531 - Auditing and Assurance Services 3(3-0)  
 ACC 536 - Forensic Accounting 3(3-0)  
 ACC 543 - Fund Accounting 3(3-0)  
 ACC 570 - Strategic Accounting System Development and Implementation 3(3-0)  
 ACC 575 - Data Analytics for Accounting 3(3-0)  
 ACC 597 - Special Topics in Accounting 1-3(Spec)

**Total: 21 semester hours**

Other pertinent information on the accounting minor includes the following:

1. At least 9 hours of accounting coursework must be taken at CMU for a minor in accounting.
2. Introductory courses in accounting transferred to CMU are accepted for not more than 6 semester hours of credit (equivalent to the hours of ACC 201/250 and ACC 202/255).
3. No more than a total of 27 hours may be taken in the College of Business Administration and counted toward graduation unless the student is majoring in the College of Business Administration.



## Business Information Systems (BIS)

For information, please contact the chairperson, 989-774-3554, 305 Grawn Hall;  
<https://www.cmich.edu/academics/colleges/college-business-administration/departments-schools/business-information-systems>

### What is Information Systems?

Information Systems (IS) is the study of how organizations use people, processes, and technology to effectively manage information. IS majors learn business management and problem-solving skills that are highly valued by employers in a variety of industries

### Why Major in Information Systems (IS)?

IS graduates perform a wide variety of functions within an organization. For example, they analyze business processes, manage projects, and provide technical training. IS graduates provide a critical link between an organization's business functions and its technical support staff. As such, IS graduates work in almost every type of organization, small and large, public and private. Specific reasons to major in IS at CMU include the following:

- Nearly 100 percent of recent IS graduates received employment offers before or immediately following graduation.
- First-year salaries for IS graduates were among the highest received by College of Business Administration graduates.
- Internship opportunities with organizations such as Dow Chemical, Dow Corning Corporation, Eli Lilly, State Farm Insurance, Auto-Owners Insurance, Ford Motor Company, Consumers Energy, and General Motors.
- Modern lab facilities in the College of Business Administration with up-to-date software.
- SAP®, the world's leading Enterprise Resource Planning (ERP) software.

### Why Major with a Concentration or Minor in Applied Business Communication (ABC)?

The Applied Business Communication (ABC) concentration in the General Business Major or the ABC minor prepares students with the critical abilities employers value most: communication, collaboration, creativity, and critical thinking. The ABC concentration or minor focuses on the following areas to help students become "job ready":

- Effective communication in a global business setting
- Social media in business
- Visual communication and digital media
- Client projects and real-world problem solving
- Professional portfolios, with evidence of student learning, proficiencies, and accomplishments

Students from any major can benefit from the critical skills developed with the ABC minor: applying technology to solve actual problems, using social media in the workplace, and developing effective communication and professional literacy skills.

### Business Information Systems at CMU

The goals of the BIS Department are (1) to provide a quality undergraduate programs to prepare students for business careers in business and information systems and (2) to provide excellence in a graduate program leading to a Master of Science in Information Systems as well as graduate coursework in information systems for the Master in Business Administration and a Graduate Certificate in SAP.

The technology-intensive courses support all degree programs within the College of Business Administration and provide opportunities for all Central Michigan University students to acquire information systems expertise.

#### Notes:

- With the exception of BIS 490, the department does not accept Credit/No Credit courses on undergraduate majors and minors.
- Graduate course offerings lead to the Master of Science in Information Systems and support the Master of Business Administration and the Graduate Certificate in SAP.

An **Undergraduate Certificate in Cybersecurity** is offered.

### The Faculty

Emil Boasson, Kenneth Desloover, Jerry Dimaria, Paul Dunn, Susan Helser, Zhenyu Huang, Mark Hwang, Chris McBride, Denise McBride, Kevin McCarron, James Melton (Chair), Robert Miller, Kyle Nothstine, Vishal Shah, Karl Smart, Stephen Tracy, Allen Tseng, Gustav Verhulsdonck

## General Business Administration Major: Applied Business Communication Concentration

*B.S. in B.A. degree*

The mission of the General Business major with a concentration in Applied Business Communication is to develop pathways to success for students in business by making connections and building relationships through effective communication, collaborative technologies, and social media in a professional setting.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. To declare the major, please the Department of Business Information Systems, Grawn 305, 989-774-3554.
2. To register for most of the courses on this major, students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)  
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

### Common Body of Knowledge Courses II (3 hours)

Select one of the following:  
BUS 351QR - Applied Business Analytics 3(3-0)  
BUS 503QR - Applied Lean Six Sigma 3(3-0)

### Required Courses I (21 hours)

BIS 260WI - Global Business Communication 3(3-0)  
BIS 308 - Visual Business Communication and Digital Media 3(3-0)  
BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)  
BIS 360WI - Applied Business Communication 3(3-0)  
BIS 470 - Applied Business Communication Integrated Capstone 3(3-0)  
BIS 495 - Internship in Applied Business Communication 1-6(Spec)  
MGT 348 - Dynamics of Organizational Behavior 3(3-0)

### Required Courses II (3 hours)

Select one of the following:  
FIN 201QR - Personal Finance 3(3-0)  
FIN 442 - Intermediate Financial Management 3(3-0)

### Electives (3 hours)

Select one of the following:  
ART 235 - Logo and Identity Design 3(0-6)  
BIS 327 - Web Site Development 3(3-0)  
BIS 342 - Intercultural Business Communication Abroad 1-9(Spec)  
BIS 347 - Enterprise Software in Business Using SAP Software 3(3-0)  
BIS 582 - Data Visualization: Theory and Practice 3(3-0)  
COM 264 - Communicating in Workplaces 3(3-0)  
COM 353 - Small Group Communication 3(3-0)  
COM 361 - Interpersonal Communication 3(3-0)  
COM 362/WGS 362 - Gender Communication 3(3-0)  
COM 365 - Persuasion and Social Influence 3(3-0)  
COM 367 - Nonverbal Communication 3(3-0)  
ENG 303WI - Technical Writing 3(3-0)  
ENT 300 - Digital Entrepreneurship 3(3-0)  
JRN 350 - Public Relations Principles and Practices 3(3-0)  
MKT 310 - Marketing Communications 3(3-0)  
MKT 340 - Personal Selling 3(3-0)  
MSL 301 - Adaptive Team Leadership 4(Spec)  
PES 380 - Sport Communication & Mass Media 3(3-0)  
Or any language at the 200 level or higher, including but not limited to: ASL, CHN, FRN, GER, GRK, JPN, LAT, OJB, RUS, SPN.

**Total: 36 semester hours**

## Information Systems Major

*B.S. in B.A. degree*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Information Systems, see an advisor in the Business Information Systems Department. To register for most of the courses on the major, students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

With the exception of BIS 490, the department does not accept Credit/No Credit courses on undergraduate majors.

### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)  
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

### Common Body of Knowledge Courses II (3 hours)

Select one of the following:  
BUS 351QR - Applied Business Analytics 3(3-0)  
BUS 503QR - Applied Lean Six Sigma 3(3-0)

### Required Courses I (15 hours)

BIS 228 - Applications Development 3(3-0)  
BIS 320 - Systems Analysis and Design 3(3-0)  
BIS 380 - Enterprise Architecture 3(3-0)  
BIS 422 - Database Management Systems 3(3-0)  
BIS 425 - Information Systems Development Project 3(3-0)

### Required Courses II (9 hours)

Select **one** of the following options:

#### Option A - Enterprise Software (9 hours)

Select three of the following:  
BIS 347 - Enterprise Software in Business Using SAP Software 3(3-0)  
BIS 357 - ABAP Programming Fundamentals 3(3-0)  
BIS 458 - Configuration and Implementation using SAP Software 3(3-0)  
BIS 598 - Integration of Business Processes Using SAP Software 4(Spec)

#### Option B - Cybersecurity (9 hours)

Select BIS 512 plus two other courses:  
BIS 512 - Cybersecurity Analysis 3(3-0)  
BIS 521 - Governance, Risk, & Compliance in Cybersecurity 3(3-0)  
BIS 523 - Cybercrime Forensics 3(3-0)  
BIS 525 - Managing Security & Privacy in the Cloud 3(3-0)  
**Note:** BIS 380 is a prerequisite for BIS 512. BIS 512 is a prerequisite for BIS 521, 523, and 525.

#### Option C - General (9 hours)

Select 9 credit hours of Business Information Systems (BIS) courses approved by an Information Systems faculty advisor.

#### Option D - Business Data Analytics (9 hours)

BIS 580 - Business Decision Modeling 3(3-0)  
BIS 581 - Business Data Analytics 3(3-0)  
BIS 582 - Data Visualization: Theory and Practice 3(3-0)

**Total: 33 semester hours**

## Minors

### Information Systems Minor

*B.A., B.A.A., B.F.A., B.S., B.S. in B.A. degrees*

The IS minor is primarily designed for students who plan a career closely allied with information systems (IS) but do not intend to make IS their primary focus. Examples of such careers include accounting, finance, marketing, human resources, logistics, or a related business area. The IS minor provides students with experience in the development, implementation, and support of IS, as well as the use of these systems in business.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Information Systems:

See an advisor in the Business Information Systems Department after declaring your major.

No more than a total of 27 hours of credit in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

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#### Required Courses I (3 hours)

Select one of the following:

BIS 100 - Introduction to Business 3(3-0)

BUS 100 - Essential Business Skills 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

ACC 201 - Concepts of Financial Accounting 3(3-0)

ACC 250 - Introduction to Financial Accounting 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:

BIS 221 - Computers in Business I 3(3-0)

BIS 255 - Information Systems 3(3-0)

#### Required Courses IV (3 hours)

Select one of the following:

BIS 347 - Enterprise Software in Business Using SAP Software 3(3-0)

BUS 331 - Integrated Business Experience 3(2-1)

#### Required Courses V (3 hours)

BIS 320 - Systems Analysis and Design 3(3-0)

#### Electives (6 hours)

Select from the following list. Students following the B.S.B.A. degree may not count BIS 323.

BIS 228 - Applications Development 3(3-0)

BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)

BIS 323 - Spreadsheet-Based Modeling for Business 3(3-0)

BIS 327 - Web Site Development 3(3-0)

BIS 357 - ABAP Programming Fundamentals 3(3-0)

BIS 380 - Enterprise Architecture 3(3-0)

BIS 422 - Database Management Systems 3(3-0)

BIS 458 - Configuration and Implementation using SAP Software 3(3-0)

BIS 512 - Cybersecurity Analysis 3(3-0)

BIS 521 - Governance, Risk, and Compliance in Cybersecurity 3(3-0)

BIS 523 - Cybercrime Forensics 3(3-0)

BIS 525 - Managing Security and Privacy in the Cloud 3(3-0)

BIS 580 - Business Decision Modeling 3(3-0)

BIS 581 - Business Data Analytics 3(3-0)

BIS 582 - Data Visualization: Theory and Practice 3(3-0)

BIS 598 - Integration of Business Processes Using SAP Software 4(Spec)

ENT 300 - Digital Entrepreneurship 3(3-0)

**Total: 21 semester hours**

### Applied Business Communication Minor

*B.A., B.A.A., B.F.A., B.S., B.S. in B.A. degrees*

This minor is for CMU students who want to develop the knowledge and skills that will make them job ready for the business world upon graduation. Students will develop pathways to success by making connections and building relationships through effective business communication, collaborative technologies, and social media in professional settings. Students will apply what they learn in real-world settings, including managing client projects in the community, through a structured series of courses that build upon one another.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Applied Business Communication: See an advisor in the Business Information Systems Department after declaring your major.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

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#### Required Courses I (3 hours)

Select one of the following:

BIS 100 - Introduction to Business 3(3-0)

BUS 100 - Essential Business Skills 3(3-0)

#### Required Courses II (18 hours)

BIS 260WI - Global Business Communication Practices 3(3-0)

BIS 308 - Visual Business Communication and Digital Media 3(3-0)

BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)

BIS 360WI - Applied Business Communication 3(3-0)

BIS 470 - Applied Business Communication Integrated Capstone 3(3-0)

BIS 495 - Internship in Applied Business Communication 1-6(Spec)

**Total: 21 semester hours**

### Cybersecurity, Undergraduate Certificate

The Undergraduate Certificate in Cybersecurity is designed for regularly admitted undergraduate student who desire to acquire advanced knowledge and skills in cybersecurity.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To enroll in the first course, BIS 512, the student must have the prerequisite of BIS 380 or BIS 510, or regular admission to the Cybersecurity certificate. See an advisor for more information.

To be considered for regular admissions, an applicant must:

1. Matriculate as a regular undergraduate student or a Non-degree Special Admission student.
2. Present a cumulative grade point average of 2.0 (C) or higher in the certificate. All courses are letter graded.
3. Demonstrate computer network literacy by prerequisite coursework or professional certifications in computer networking or cybersecurity.
4. Declare the certificate program by the end of the third week of classes of the term in which the student will complete the certificate.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the students is majoring in the College of Business Administration.

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#### Required Courses (15 hours)

BIS 512 - Cybersecurity Analysis 3(3-0)

BIS 521 - Governance, Risk, & Compliance in Cybersecurity 3(3-0)

BIS 523 - Cybercrime Forensics 3(3-0)

BIS 525 - Managing Security & Privacy in the Cloud 3(3-0)

BIS 530 - Cybersecurity, Systems, and Network Certification 3(3-0)

**Total: 15 semester hours**

## Economics (ECO)

For information, please contact the chairperson, 989-774-3870, 321 Sloan Hall;

<https://www.cmich.edu/academics/colleges/college-business-administration/departments-schools/economics>

### Why Study Economics?

Economics is the study of how societies satisfy their many material wants and needs. An understanding of economic topics such as supply and demand, consumption of goods and services, inflation and recession, is important to individuals and groups of people who are responsible for making decisions about resources. For example, individuals are concerned with maximizing the purchasing power of their income; businesses strive to efficiently use raw materials and labor in order to remain competitive in the global marketplace; governments want to know how political decisions will affect the economic actions of its residents. The study of economics is an excellent foundation for further study and/or a career in law, business, international affairs, public administration or education.

### Economics at CMU

Our diversity of course offerings and majors reflect the broad range of topics in the discipline and wide range of interests of the faculty. Students can earn an economics major on three degree programs: the Bachelor of Arts (B.A.), Bachelor of Science (B.S.), and the Bachelor of Science in Business Administration (B.S. in B.A.).

All economics students gain a set of quantitative and analytical skills that will serve them well in their careers and personal lives. Economics seeks to measure and predict human behavior so it is the most quantitative of the social sciences. Each major must acquire a proficiency in mathematics and statistics to be adequately prepared for the analytical work required in the discipline: problem-solving and decision-making. Every student will be challenged to identify problems, create alternative solutions and decide which option will best serve the goals of the decision-maker. Since an economics student acquires general training in decision-making skills, there are a wide variety of employment opportunities upon graduation and beyond. These general skills allow graduates to successfully compete in a constantly changing labor market during this information age.

Students with a liberal arts perspective may be attracted to economics because it is a major that is flexible in terms of topics and employment options. Some courses concentrate on decision-making within the firm and the impact of those decisions on the firm's performance. Other courses take a broader social perspective. These may address the decision-making process in governmental organizations, the role of governments in society, or the impacts of government policies on individual citizens and private business. Economics also has much to add to public debates on social issues such as the role of women in the economy or pollution control.

Economics majors earning a degree in business administration would complete the same core requirements as other majors in the college. These requirements are designed to provide a specific set of technical and personal skills used in business and to provide an appreciation of the wider social environment in which businesses operate. Economics majors have a more restricted set of elective courses in this degree program. These courses provide technical skills (e.g., statistical methods and forecasting), greater depth in broader business issues (e.g., environmental policies and international institutions), or narrower applications of economics to business topics (e.g., government regulation and management decision-making).

The department is also committed to general education, and we offer a variety of courses in Groups III and IV of the University Program. Social institutions are created by people through a deliberate decision-making process. The structure of these institutions influence individual behavior by offering opportunities and imposing constraints. Individual behavior, in turn, may support or undermine these social structures or actively seek to change the institutions. This interplay between individuals and social institutions provides the essential material for these general education courses: economic dimensions of social issues (ECO 150), detailed analysis of how markets influence economic performance (ECO 201 and 202), comparisons of different economic systems in East Asia (ECO 281), and the influence of information on individual economic behavior in markets (ECO 222QR).

### The Faculty

Vikesh Amin, Bharati Basu, Gregory Falls (Chair), Aparna Lhila, Gary M. Pecquet, Samuel Raisanen, Golnaz Taghvatalab, Jason E. Taylor, Linlan Xiao, Nayib Zamarripa



## Majors

### Economics Major

*B.A.; B.S. degrees*

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Up to six (6) hours may be taken as Credit/No Credit and counted toward the major.

Students are strongly advised to select elective courses in consultation with an Economic Department advisor.

Students earning the Economics major on the B.A. or B.S. degrees are strongly advised to complete the mathematics and statistics courses early in their academic program. Note that MTH 130 is a prerequisite for STA 382QR.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

#### Required Economic Courses (15 hours)

ECO 201 - Principles of Macroeconomics 3(3-0)

ECO 202 - Principles of Microeconomics 3(3-0)

ECO 306 - Money and Banking 3(3-0)

ECO 365 - Intermediate Microeconomic Theory 3(3-0)

ECO 370 - Intermediate Macroeconomic Theory 3(3-0)

#### Required Mathematics Courses (3-4 hours)

Select one of the following:

MTH 107 - College Algebra 3(3-0)

MTH 132 - Calculus I 4(4-0)

MTH 217 - Business Calculus 4(4-0)

#### Required Statistics Courses (3 hours)

Select one of the following:

ECO 285 - Statistical Methods in Economics 3(3-0)

STA 282QR - Introduction to Statistics 3(3-0)

STA 382QR - Elementary Statistical Analysis 3(3-0)

#### Electives (15 hours)

Select 15 hours of ECO courses; 9 hours of ECO courses must be numbered 300 or above.

**Total: 36-37 semester hours**

### Economics Major

*B.S. in B.A. degree*

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Economics:

Up to six (6) hours may be taken as Credit/No Credit and counted toward the major.

Students are strongly advised to select elective courses in consultation with an Economic Department advisor.

#### Common Body of Knowledge Courses (9 hours)

BUS 100 - Essential Business Skills 3(3-0)

BUS 351QR - Applied Business Analytics 3(3-0)

MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

#### Required Courses (9 hours)

ECO 306 - Money and Banking 3(3-0)

ECO 365 - Intermediate Microeconomic Theory 3(3-0)

ECO 370 - Intermediate Macroeconomic Theory 3(3-0)

#### Electives (15 hours)

Select 15 hours of ECO courses; 9 hours of ECO courses must be numbered 300 or above.

**Total: 33 semester hours**

*Interdepartmental*

### Law and Economics Major

*B.A.; B.S. degrees*

This major is listed in the College of Business Administration section. See the index for the page number.

*Interdepartmental*

### Law and Economics Major

*B.S. in B.A. degree*

This major is listed in the College of Business Administration section. See the index for the page number.

## Minors

### Economics Minor

*B.A.; B.A.A.; B.S. degrees*

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Economics: See an advisor in the Department of Economics after declaring your major.

Up to six (6) hours may be taken as Credit/No Credit and counted toward the minor.

Students are strongly advised to select elective courses in consultation with an Economic Department advisor.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

#### Required Courses (6 hours)

ECO 201 - Principles of Macroeconomics 3(3-0)

ECO 202 - Principles of Microeconomics 3(3-0)

#### Electives (15 hours)

Select 15 hours of ECO courses; 9 hours of ECO courses must be numbered 300 or above.

**Total: 21 semester hours**

### Economics Minor

*B.S. in B.A. degree*

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Economics: See an advisor in the Department of Economics after declaring your major.

Up to six (6) hours may be taken as Credit/No Credit and counted toward the minor.

Students are strongly advised to select elective courses in consultation with an Economic Department advisor.

#### Required Courses (6 hours)

ECO 202 - Principles of Microeconomics 3(3-0)

ECO 204 - Principles of Macro- and Global Economics 3(3-0)

#### Electives (15 hours)

Select 15 hours of ECO courses; 9 hours of ECO courses must be numbered 300 or above.

**Total: 21 semester hours**

## Entrepreneurship (ENT)

For information, please contact the chairperson, 989-774-2624, 164 Grawn Hall;  
<https://www.cmich.edu/academics/colleges/college-business-administration/departments-schools/entrepreneurship>

Entrepreneurship is the engine that powers economic growth and transports people from poverty to prosperity. It is also a mindset. An entrepreneur is someone who sees opportunities that others do not and is willing to exert initiative and tolerate risk to pursue them. An entrepreneur combines assets and resources, business insight and skill, and the entrepreneurial spirit (which is characterized by innovation, flexibility, persistence, and a willingness to risk failure) to create value, jobs, and wealth. Entrepreneurship impacts a nation's ability to succeed in a rapidly changing and increasingly competitive global economy.

### Why Study Entrepreneurship?

The study of entrepreneurship at CMU provides students with a comprehensive, hands-on business education that prepares them with the right skills, training, and mindset to start new businesses. However, entrepreneurship involves more than founding new companies. Thus, CMU's entrepreneurship offerings also empower students to: be change agents at established firms; manage small businesses; work as employees at new ventures; serve social enterprises; lead family businesses; build franchises; become independent inventors; develop self-employment niches; and acquire existing companies.

### Entrepreneurship at CMU

CMU's entrepreneurship program shapes budding entrepreneurs through our strong academic curriculum and practical experiences.

The Department of Entrepreneurship at CMU offers an Entrepreneurship Major, in pursuit of the Bachelor of Applied Arts degree, as well as an Entrepreneurship Minor and a certificate in Entrepreneurial Studies.

The Entrepreneurship Major offers a broad foundation of business courses with an entrepreneurship focus. The skills and knowledge acquired is valued by both new ventures and established organizations. Students discover their own aptitude for entrepreneurship and learn how to find and evaluate business opportunities, identify potential sources of funding, organize and manage new businesses, identify and manage risks, and develop strategies to grow new and existing ventures, including social ventures. The curriculum focuses on academic rigor and experiential learning targeted to develop the business acumen needed to start a business, to acquire and lead existing ventures, and to work effectively within other growth-oriented organizations. The faculty and staff are committed to teaching practical skills, inspiring innovative thinking, and connecting students with resources that include mentors, experts, angel investors, venture capitalists, and other stakeholders within the entrepreneurial ecosystem.

The minor offers a unique learning experience to students who aspire to start a business of their own or secure employment in a career that is related to, or dependent on, innovation and entrepreneurial skills.

The certificate requires just four courses. When completing these courses, students build essential business skills and learn more about entrepreneurship, innovation, and venture development.

### The Faculty

Joseph Affholter, Kevin Dermody, Alan Fitzpatrick, Louis Foreman, Joseph Green, Nicholas Griffin, John Gustincic, Jeffrey Hoyle, Julie Messing, David Nowis, Michael Pisani, Mark Potts, Spenser Robinson (Chair), Jennifer Scheehle, Malika Simmons, Adam Smith, Penny Woelfert, Lynne Zagami, Lauren Zettel

## Entrepreneurship Major

*B.A.A. degree*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Entrepreneurship, see an advisor in the Department of Entrepreneurship. No more than 9 hours of electives taken from the same department as the student's major will count toward graduation requirements.

#### Required Courses (36-39 hours)

BUS 100 - Essential Business Skills 3(3-0)  
 ENT 200 - Introduction to Entrepreneurship 3(3-0)  
 ENT 210 - Accounting Concepts for Entrepreneurs 3(3-0)  
 ENT 213 - Economics for Entrepreneurs 3(3-0)  
 ENT 221 - Marketing Strategies for Entrepreneurs 3(3-0)  
 ENT 300 - Digital Entrepreneurship 3(3-0)  
 ENT 301 - Innovation & Entrepreneurship 3(3-0)  
 ENT 320 - Financial Concepts and Entrepreneurial Ventures 3(3-0)  
 ENT 420 - Legal Aspects of New Ventures 3(3-0)  
 ENT 444 - Internship in Entrepreneurship 3-6(Spec)  
 ENT 495 - Venture Development 3(3-0)  
 STA 282QR - Introduction to Statistics 3(3-0)

#### Electives (9 hours)

Select 9 hours from the following:

BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)  
 ENT 416 - Entrepreneurship in the Global Economy 3(3-0)  
 ENT 419 - Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)  
 ENT 492 - Emerging Venture Consulting 3(3-0)  
 ENT 497 - Special Topics in Entrepreneurship 1-12(Spec)  
 MGT 310 - Small Business Management 3(3-0)  
 MGT 312 - Introduction to Management 3(3-0)  
 MGT 320 - Human Resource Management 3(3-0)  
 MGT 357 - Women in Management 3(3-0)  
 MGT 360 - Managing Cultural Differences and Diversity in a Global Economy 3(3-0)  
 MKT 340 - Personal Selling 3(3-0)

Any additional ENT course, 500 level or higher with the exception of ENT 600 and ENT 605.

**Total: 45-48 semester hours**

## Entrepreneurship Minor

*B.A., B.A.A., B.F.A., B.S., and B.S. in B.A. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Entrepreneurship, see an advisor in the Department of Entrepreneurship after declaring your major.

#### Required Courses (12 hours)

BUS 100 - Essential Business Skills 3(3-0)  
 ENT 200 - Introduction to Entrepreneurship 3(3-0)  
 ENT 301 - Innovation & Entrepreneurship 3(3-0)  
 ENT 495 - Venture Development 3(3-0)

#### Electives (9 hours)

Select from the appropriate group for your degree:

##### For students following the BSBA degree (9 hours)

Select 9 hours from the following:

BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)  
 ENT 300 - Digital Entrepreneurship 3(3-0)  
 ENT 416 - Entrepreneurship in the Global Economy 3(3-0)  
 ENT 419 - Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)  
 ENT 444 - Internship in Entrepreneurship 3-6(Spec)  
 ENT 492 - Emerging Venture Consulting 3(3-0)  
 ENT 497 - Special Topics in Entrepreneurship 1-12(Spec)

MGT 310 - Small Business Management 3(3-0)  
 MGT 320 - Human Resource Management 3(3-0)  
 MGT 357 - Women in Management 3(3-0)  
 MGT 360 - Managing Cultural Differences and Diversity in a Global Economy 3(3-0)  
 MKT 340 - Personal Selling 3(3-0)

Any additional ENT course, 500 level or higher with the exception of ENT 600 and ENT 605.

#### For students following all other degrees (9 hours)

Select 9 hours from the following:

BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)  
 ENT 210 - Accounting Concepts for Entrepreneurs 3(3-0)  
 ENT 213 - Economics for Entrepreneurs 3(3-0)  
 ENT 221 - Marketing Strategies for Entrepreneurs 3(3-0)  
 ENT 300 - Digital Entrepreneurship 3(3-0)  
 ENT 320 - Financial Concepts and Entrepreneurial Ventures 3(3-0)  
 ENT 416 - Entrepreneurship in the Global Economy 3(3-0)  
 ENT 419 - Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)  
 ENT 420 - Legal Aspects of New Ventures 3(3-0)  
 ENT 444 - Internship in Entrepreneurship 3-6(Spec)  
 ENT 492 - Emerging Venture Consulting 3(3-0)  
 ENT 497 - Special Topics in Entrepreneurship 1-12(Spec)  
 MGT 310 - Small Business Management 3(3-0)  
 MGT 312 - Introduction to Management 3(3-0)  
 MGT 320 - Human Resource Management 3(3-0)  
 MGT 357 - Women in Management 3(3-0)  
 MGT 360 - Managing Cultural Differences and Diversity in a Global Economy 3(3-0)  
 MKT 340 - Personal Selling 3(3-0)

Any additional ENT course, 500 level or higher with the exception of ENT 600 and ENT 605.

**Total: 21 semester hours**

## Undergraduate Certificate - Entrepreneurial Studies

This 12-credit hour certificate is designed for undergraduate students who desire to build essential business skills and learn more about entrepreneurship, innovation, and venture development. The certificate welcomes degree-seeking students of any major and non-degree-seeking students. However, the certificate is not available to ENT majors or ENT minors. Further, no more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

#### Required Courses (12 hours)

BUS 100 - Essential Business Skills 3(3-0)  
 ENT 200 - Introduction to Entrepreneurship 3(3-0)  
 ENT 301 - Innovation & Entrepreneurship 3(3-0)  
 ENT 495 - Venture Development 3(3-0)

**Total: 12 semester hours**

## Finance and Law (FIN, BLR)

For information, please contact the chairperson, 989-774-3362, 332 Sloan Hall;  
<https://www.cmich.edu/academics/colleges/college-business-administration/departments-schools/finance-and-law>

### Why Study Finance? Why Study Law?

The major problem underlying the study of Finance is the lack of enough money to meet all needs. Finance is the study of money management, the acquiring of funds (cash) and the directing of these funds to meet particular objectives. Finance, then, is the cornerstone of money decisions, whether in investing of client funds, business funds, or banking. Personal Financial Planning prepares students to advise and help individuals meet their personal financial goals such as retirement and investment planning. Courses in law provide a foundation for law-related career objectives. Business Law and Regulation courses explore the basis for business regulation and the Legal Studies minor explores the principles of jurisprudence.

### Finance and Law at CMU

The Department of Finance and Law at CMU offers majors in Finance, Personal Financial Planning, and Real Estate Development & Finance, and minors in Legal Studies, Finance, and Real Estate Development & Finance. The Finance major is the study of the principles of financial management and financial institutions. The Finance major incorporates principles of investments and portfolio management, but focuses upon meeting the financial objectives of modern corporations. The Personal Financial Planning major is the study of financial principles relating to personal financial objectives and the techniques of achieving personal financial objectives. The Legal Studies minor contains courses providing instruction to improve the understanding of the operations of law, its function, capabilities, and limitations. The Finance and Law Department and the Economics Department offer an interdepartmental major in Law and Economics.

### Majors

Majors in this department are available only to students pursuing the Bachelor of Science in Business Administration degree. At least 18 credit hours of finance coursework must be taken at CMU, and FIN 499, required in the Finance major, must be taken at CMU. The only course that may be taken credit/no credit is the internship in Finance.

### The Faculty

Abu S. Amin (Chair), Thomas Anthony, Vigdis Boasson, Elizabeth A. Campbell, Matt Coffey, John Diltz, Adam Epstein, James Felton, Jill Lauderman, David McGuire, Mark Potts, Bradley Taylor, Woongsun Yoo

## Majors

### Finance Major

*B.S. in B.A. degree*

The Finance Major prepares students for careers in banking, corporate finance, and investments.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Finance:

See an advisor in the Department of Finance and Law. To register for most of the courses on the major students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

At least 18 hours of Finance coursework must be taken at CMU. For the Finance Major, FIN 499 must be taken at CMU. Only FIN 490 may be taken as Credit/No Credit and counted toward the major.

#### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)  
 MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

#### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)  
 BUS 503QR - Applied Lean Six Sigma 3(3-0)

#### Required Courses (24 hours)

ACC 301 - Intermediate Accounting I 3(3-0)  
 FIN 315 - Principles of Investments 3(3-0)  
 FIN 425 - Options and Futures 3(3-0)  
 FIN 442 - Intermediate Financial Management 3(3-0)  
 FIN 448 - Fundamental Financial Analysis 3(3-0)  
 FIN 472 - Money and Capital Markets 3(3-0)  
 FIN 499 - Advanced Financial Management 3(3-0)  
 FIN 573 - International Finance 3(3-0)

#### Electives (3 hours)

Select hours from the following:

ACC 302 - Intermediate Accounting II 3(3-0)  
 ACC 321 - Managerial Cost Accounting 3(3-0)  
 FIN 307 - Fundamentals of Personal Financial Planning 3(3-0)  
 FIN 335 - Real Estate Principles 3(3-0)

Any 400 level or above FIN course.

**Total: 36 semester hours**



## Personal Financial Planning Major

*B.S. in B.A. degree*

The Personal Financial Planning major prepares students for a career in personal financial planning and personal financial consulting.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Personal Financial Planning, see an advisor in the Department of Finance and Law.

To register for most of the courses on the major, students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

At least 18 hours of Finance coursework must be taken at CMU.

Only FIN 490 may be taken as Credit/No Credit and counted toward the major.

Students with this major may not count FIN 307, FIN 317, FIN 347, FIN 445/BLR 445, and FIN 447 toward the Finance Minor.

### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)

MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)

BUS 503QR - Applied Lean Six Sigma 3(3-0)

### Required Courses I (18 hours)

ACC 311 - Federal Income Taxation I 3(3-0)

FIN 307 - Fundamentals of Personal Financial Planning 3(3-0)

FIN 317 - Insurance Planning 3(3-0)

FIN 347 - Retirement Planning 3(3-0)

FIN 445/BLR 445 - Personal Estate Planning 3(3-0)

FIN 447 - Cases in Personal Financial Planning 3(3-0)

### Required Courses II (3 hours)

Select one of the following:

FIN 310 - Investment Strategies for Personal Financial Planners 3(3-0)

FIN 315 - Principles of Investments 3(3-0)

### Electives (6 hours)

Select two courses from the following:

FIN 335 - Real Estate Principles 3(3-0)

FIN 425 - Options and Futures 3(3-0)

FIN 455 - Portfolio Management 3(3-0)

FIN 472 - Money and Capital Markets 3(3-0)

FIN 490 - Internship in Finance 1-3(Spec)

FIN 573 - International Finance 3(3-0)

MKT 340 - Personal Selling 3(3-0)

**Total: 36 semester hours**

## Real Estate: Development & Finance Major

*B.S. in B.A. degree*

The Real Estate Development & Finance major teaches students to make effective decisions about real estate investment including analysis of debt financing and valuation metrics. Invest, operate or develop office buildings, industrial parks, apartments, subdivisions and other real estate assets while considering architecture, construction, entrepreneurship, law and urban planning. This people-oriented program focuses on the development, investment, and management of real estate as a business. Learn how the built world operates, how professionals make investment/development decisions and understand risk/reward. The mission of the Real Estate Development & Finance major is to prepare students for employment and leadership across the spectrum of real estate development, finance and business in global society. The Real Estate Development and Finance program goals are (1) Provide tools to analyze risk-adjusted investment value of real estate assets, (2) Impart understanding of social, economic, legal and interpersonal aspects of real estate development, (3) Promote comprehension of domestic and global financial markets as they relate to real estate.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Real Estate: Development and Finance, see the Real Estate program advisor. To register for most of the courses on the major, students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

At least 18 hours of Finance coursework must be taken at CMU. Only FIN 490 may be taken as Credit/No Credit and counted toward the major.

Students with this major may not count FIN 335, FIN 337, and FIN 438 toward the Finance Minor.

### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)

MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)

BUS 503QR - Applied Lean Six Sigma 3(3-0)

### Required Courses (18 hours)

BLR 330 - Real Estate Law 3(3-0)

FIN 335 - Real Estate Principles 3(3-0)

FIN 336 - Real Estate Finance and Investments 3(3-0)

FIN 337 - Real Estate Valuation/Appraisal 3(3-0)

FIN 438 - Real Estate Development 3(3-0)

FIN 490 - Internship in Finance 1-3(Spec)

### Electives I (6 hours)

Select 6 hours from the following:

ECO 375 - Economics of Cities and Regions 3(3-0)

FIN 307 - Fundamentals of Personal Financial Planning 3(3-0)

FIN 315 - Principles of Investments 3(3-0)

FIN 425 - Options and Futures 3(3-0)

FIN 448 - Fundamental Financial Analysis 3(3-0)

FIN 472 - Money and Capital Markets 3(3-0)

### Electives II (3 hours)

Select an additional 3 hours from the following:

BLR 521 - Environmental Law and Policy 3(3-0)

ECO 375 - Economics of Cities and Regions 3(3-0)

FIN 307 - Fundamentals of Personal Financial Planning 3(3-0)

FIN 315 - Principles of Investments 3(3-0)

FIN 425 - Options and Futures 3(3-0)

FIN 448 - Fundamental Financial Analysis 3(3-0)

FIN 472 - Money and Capital Markets 3(3-0)

MKT 340 - Personal Selling 3(3-0)

**Note:** Courses selected in Electives I may not also be used in Electives II.

**Total: 36 semester hours**

*Interdepartmental*

## Law and Economics Major

*B.A.; B.S. degrees*

This major is listed in the College of Business Administration section. See the index for the page number.

*Interdepartmental*

## Law and Economics Major

*B.S. in B.A. degree*

This major is listed in the College of Business Administration section. See the index for the page number.

## Minors

### Finance Minor

*B.A.; B.A.A.; B.S.; B.F.A.; B.S. in B.A. degrees*

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Finance: See an advisor in the Department of Finance and Law after declaring your major.

1. At least 15 hours of finance coursework must be taken at CMU.
  2. Credit/No Credit coursework will not count.
  3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.
- 

#### Required Courses I (3 hours)

Select one of the following:

ACC 201 - Concepts of Financial Accounting 3(3-0)  
ACC 250 - Introduction to Financial Accounting 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

ACC 202 - Concepts of Managerial Accounting 3(3-0)  
ACC 255 - Managerial Accounting & Decision Making 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:

ECO 201 - Principles of Macroeconomics 3(3-0)  
ECO 204 - Principles of Macro- and Global Economics 3(3-0)

#### Required Courses IV (3 hours)

Select one of the following:

FIN 302 - Integrated Financial Analysis 3(3-0)  
FIN 332 - Managerial Finance 3(3-0)

#### Electives (12 hours)

Select 12 hours from the following:

FIN 307 - Fundamentals of Personal Financial Planning 3(3-0)  
FIN 310 - Investment Strategies for Personal Financial Planners 3(3-0)  
FIN 315 - Principles of Investments 3(3-0)  
FIN 317 - Insurance Planning 3(3-0)  
FIN 335 - Real Estate Principles 3(3-0)  
FIN 337 - Real Estate Valuation/Appraisal 3(3-0)  
FIN 347 - Retirement Planning 3(3-0)  
FIN 397 - Special Topics 3-6(Spec)  
FIN 416 - Institutional Operations 3(3-0)  
FIN 425 - Options and Futures 3(3-0)  
FIN 442 - Intermediate Financial Management 3(3-0)  
FIN 445/BLR 445 - Personal Estate Planning 3(3-0)  
FIN 447 - Cases in Personal Financial Planning 3(3-0)  
FIN 448 - Fundamental Financial Analysis 3(3-0)  
FIN 472 - Money and Capital Markets 3(3-0)  
FIN 490 - Internship in Finance 1-3(Spec)  
FIN 573 - International Finance 3(3-0)  
FIN 597 - Special Topics 1-3(Spec)

**Note:** You may count either FIN 310 or 315, not both.

**Note:** Many courses have prerequisites.

**Total: 24 semester hours**

### Legal Studies Minor

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

The Legal Studies minor is designed for the student who will work in a business regulated by government or in a governmental unit that regulates business behavior. It will be of particular interest to students in business, history, economics, and political science.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Legal Studies: See an advisor in the Department of Finance and Law after declaring your major.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

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#### Required Courses I (3 hours)

Select one of the following:

BLR 202 - Legal Environment of Business 3(3-0)  
BLR 235 - Business Law 3(3-0)

#### Required Courses II (3 hours)

BLR 302 - Law of Agreements 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:

HST 228 - American Business: A History 3(3-0)  
HUM 303 - Law and Society: Great Trials 3(3-0)  
PHL 118 - Moral Problems 3(3-0)  
PHL 140 - Introduction to Symbolic Logic 3(3-0)  
PHL 141QR - Introduction to Logical Problem Solving 3(3-0)  
PHL 318 - Business Ethics 3(3-0)

#### Required Courses IV (3 hours)

Select one of the following:

BLR 222 - The Search for Racial Justice through Law 3(3-0)  
BLR 325 - Women and the Law 3(3-0)  
BLR 365 - Native American Justice Through Law 3(3-0)

#### Required Courses V (3 hours)

Select one of the following:

BLR 310 - Alternative Dispute Resolution in Business 3(3-0)  
BLR 410 - Regulatory Law 3(3-0)  
ECO 410 - Government and Business 3(3-0)  
PSC 320 - The American Legislative Process 3(3-0)  
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

#### Electives (6 hours)

Select one of the following:

Any two additional BLR courses of 300 or above

**OR**

Any one additional BLR course of 300 or above and the following:

ECO 350/BLR 350 - Law and Economics 3(3-0)

**Total: 21 semester hours**

## Real Estate: Development and Finance Minor

*B.A., B.A.A., B.F.A., B.S., B.S. in B.A. degrees*

The Real Estate Development & Finance minor is designed to provide students in various fields with a combination of skills and knowledge needed to be successful in a career related to real estate. The skills and knowledge derived from this program will enhance a student's employability and marketability in many areas. It will be of particular interest to students in business, construction management, environmental and land use planning, and entrepreneurship.

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Real Estate: Development & Finance, see the Real Estate program advisor after declaring your major.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

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#### Required Courses I (3 hours)

Select one of the following:

ACC 201 - Concepts of Financial Accounting 3(3-0)

ACC 250 - Introduction to Financial Accounting 3(3-0)

ENT 210 - Accounting Concepts for Entrepreneurs 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

ECO 202 - Principles of Microeconomics 3(3-0)

ECO 203 - Microeconomic Principles for Business 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:

ENT 320 - Financial Concepts and Entrepreneurial Ventures 3(3-0)

FIN 302 - Integrated Financial Analysis 3(3-0)

FIN 332 - Managerial Finance 3(3-0)

**Note:** Only Entrepreneurship Majors are eligible to select ENT 320 for this minor.

#### Required Courses IV (6 hours)

FIN 335 - Real Estate Principles 3(3-0)

FIN 336 - Real Estate Finance & Investments 3(3-0)

#### Electives I (3 hours)

Select one of the following:

BLR 330 - Real Estate Law 3(3-0)

ECO 375 - Economics of Cities and Regions 3(3-0)

FIN 337 - Real Estate Valuation & Appraisal 3(3-0)

#### Electives II (3 hours)

Select from the following courses for an additional 3 hours:

BLR 330 - Real Estate Law 3(3-0)

BLR 521 - Environmental Law and Policy 3(3-0)

ECO 375 - Economics of Cities and Regions 3(3-0)

FIN 307 - Fundamentals of Personal Financial Planning 3(3-0)

FIN 315 - Principles of Investments 3(3-0)

FIN 337 - Real Estate Valuation/Appraisal 3(3-0)

FIN 425 - Options and Futures 3(3-0)

FIN 448 - Fundamental Financial Analysis 3(3-0)

FIN 472 - Money and Capital Markets 3(3-0)

MKT 340 - Personal Selling 3(3-0)

Or chosen in consultation with Real Estate program advisor.

**Total: 21 semester hours**

# Management (MGT)

For information, please contact the chairperson, 989-774-3193, 200 Smith Hall;  
<https://www.cmich.edu/academics/colleges/college-business-administration/departments-schools/management>

Management is decision making with respect to the allocation of an organization's physical and human resources toward the achievement of specific objectives. Although management as a field of study is most often associated with business administration, its subject matter can be applied in a broad range of settings from the management of one's own personal resources to those of social, governmental, educational, health care, and religious organizations.

## Why Study Management?

Management study is recommended for those individuals who desire the knowledge and skill to influence others and develop business processes that can positively influence organizational productivity. The principles of management can be effectively applied in a broad range of group, organizational, and societal settings. Students of management are trained to be decision makers, problem solvers, and leaders.

## Management at CMU

A program of study in management can be pursued through completion of one of the five majors or through a minor, which can be individually designed to complement the student's interests. All programs emphasize development of analytical tools that assist in effective decision making and problem solving. A General Management major is available to those students who desire a broad base of knowledge and combines coursework in each management discipline. The Human Resource Management major provides the student with the knowledge and skills necessary to create, develop, and maintain a productive work force. The International Business major was developed in response to today's rapidly expanding global business community. A foreign language requirement and international experience are included in this program. The Purchasing and Supply Management major prepares students to identify global sources for supply, establish logistics and support systems, design vendor evaluation systems, and more. A Management minor is available for students who are pursuing a degree other than business administration yet wish to obtain a foundation in management principles and practices.

## The Faculty

Naga Alamuri, John Bunch, Chia-Ching (Edward) Chou (Chair), Catherine Helmuth, Hyungu Kang, Kevin Love, Alexandra MacDougall, Amy McGinnis, Michael Pisani, Mihai Popa, Jarvis Smallfield, Mohan Song, Chelakara Subbaraman, Tomas Thundiyil, Sebastien Vendette, Vincent Whitelock, Kun Yang, Merrilyn Yeboah

## Majors

### General Management Major

*B.S. in B.A. degree*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in General Management:

1. To register for most of the courses on the major, students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the Bulletin for course prerequisites.
2. Courses taken on a Credit/No Credit basis are not accepted on management department majors.
3. At least 15 credit hours of the required and elective coursework of the major must be taken in the accredited AACSB Program at CMU.

Students cannot major in both General Management and Human Resource Management.

Students earning this major may not count BUS 321, BUS 331, BUS 351, MGT 311, MGT 312, MGT 340, MKT 300, MKT 301, FIN 332, or ENT 320 toward the General Management Major.

#### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)  
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

#### Common Body of Knowledge Courses II (3 hours)

Select one of the following:  
BUS 351QR - Applied Business Analytics 3(3-0)  
BUS 503QR - Applied Lean Six Sigma 3(3-0)

#### Required Courses (18 hours)

MGT 320 - Human Resource Management 3(3-0)  
MGT 333 - Purchasing Management 3(3-0)

MGT 348 - Dynamics of Organizational Behavior 3(3-0)

MGT 355 - Communications: Managerial Applications 3(3-0)

MGT 360 - Managing Cultural Differences and Diversity in a Global Economy 3(3-0)

MGT 365 - International Business 3(3-0)

#### Electives (3 hours)

Any Management or College of Business Administration course, 300 level or higher with the exception of MKT 300, MGT 312, MGT 340, FIN 332, and ENT 320.

**Total: 30 semester hours**

### Human Resource Management Major

*B.S. in B.A. degree*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Human Resource Management, see an advisor in the Department of Management. To register for most of the courses on the major students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

Courses taken on a Credit/No Credit basis are not accepted on management department majors.

At least 15 credit hours of the required and elective coursework of the major must be taken in the accredited AACSB Program at CMU.

Students cannot major in both General Management and Human Resources Management.

Students earning this major may not count BUS 321, BUS 331, BUS 351, MGT 311, MGT 312, MGT 340, MKT 300, MKT 301, FIN 332, or ENT 320 toward the Human Resource Management Major.

(continued)



### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)

MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)

BUS 503QR - Applied Lean Six Sigma 3(3-0)

### Required Courses (18 hours)

MGT 320 - Human Resource Management 3(3-0)

MGT 348 - Dynamics of Organizational Behavior 3(3-0)

MGT 445 - Compensation Administration 3(3-0)

MGT 446 - Industrial Relations 3(3-0)

MGT 447 - Personnel Selection and Evaluation 3(3-0)

MGT 484 - Human Resource Training and Development 3(3-0)

### Electives (3 hours)

Any College of Business Administration course, 300 level or higher.

**Total: 30 semester hours**

## Minors

### Management Minor

*B.S. in B.A. degree*

This minor is designed for students in the College of Business Administration who wish to complement their majors (e.g., Accounting, Finance, etc.) with deeper understanding of managerial knowledge and skills.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in management:

1. See an advisor in the Department of Management.
2. A minimum cumulative GPA of 2.5 based on completion of at least 56 credit hours is required.
3. At least 15 hours beyond their major requirements are required for business majors.
4. The Management Minor for B.S. in B.A. degree may NOT be taken by students who are completing a major in the Department of Management (i.e., General Management, Human Resources Management, International Business, or Purchasing and Supply Management).

#### Required Courses (12 hours)

MGT 258 - Effective Management of Human Resources in Organizations 3(3-0)

MGT 303/MKT 303 - Integrated Supply Chain Management 3(3-0)

MGT 320 - Human Resource Management 3(3-0)

MGT 365 - International Business 3(3-0)

#### Electives I (6 hours)

Select 6 hours from the Department of Management at the 300-level or higher.

#### Electives II (3 hours)

Select 3 hours from the College of Business Administration at the 300-level or higher. Required courses on the BSBA degree cannot be counted.

**Total: 21 semester hours**

### Management Minor

*B.A.; B.A.A.; B.F.A.; B.S. degrees*

This minor is designed to provide sufficient flexibility to accommodate students with varying backgrounds and career objectives.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Management:

1. A minimum cumulative GPA of 2.5 based on completion of at least 56 credit hours is required.
2. The minor is available only to students pursuing majors outside the College of Business Administration. If you are pursuing a teaching degree you may not choose this minor.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation.
4. Courses taken Credit/No Credit basis are not accepted on the management department minor.

#### Required Courses (9 hours)

MGT 312 - Introduction to Management 3(3-0)

MGT 320 - Human Resource Management 3(3-0)

MGT 348 - Dynamics of Organizational Behavior 3(3-0)

#### Elective Courses (12 hours)

1. Six (6) hours from the Department of Management.
2. Six (6) hours from the College of Business Administration.

**Total: 21 semester hours**

### Purchasing and Supply Management Major

*B.S. in B.A. degree*

This is an interdepartmental major. Please check the index for the page number.

### International Business Major

*B.S. in B.A. degree*

Advisor: Assigned by the Department of Management (989-774-3193)

This is an interdepartmental major. Please check the index for the page number.

## Marketing, Hospitality, and Logistics (MKT, HSA, HOA)

For information, please contact the chairperson, 989-774-3701, 100 Smith Hall;  
<https://www.cmich.edu/academics/colleges/college-business-administration/departments-schools/marketing-and-hospitality-services-administration>

### Why Study Marketing, Hospitality, and Logistics?

The study of marketing prepares you for a diverse number of career areas including marketing manager, marketing researcher, sales executive, retail manager, promotion manager, advertising executive or logistics manager. The field offers study of global and domestic markets and the customers who impact those markets.

The largest industry, and one of the world's fastest growing, is travel and tourism. The hospitality services administration program prepares students for business management careers in the many segments of this industry, such as lodging, food service, and travel/tourism.

### Marketing, Hospitality, and Logistics at CMU

The objective of the department is to provide undergraduate and graduate students with the quality education needed for success in professional and management positions. The department also offers required or elective courses for students specializing in other major areas who desire some related background in marketing or hospitality services. Students are prepared for business careers through coursework, internships, and student organizations. Behavioral and communication skills development, problem solving and analytical abilities, knowledge of organizational planning, directing, controlling, and advances in business trends such as electronic commerce, are emphasized.

The undergraduate marketing program is designed to prepare the student to manage the marketing process within the firm and in the social, political, and economic environment. Opportunity is provided to obtain knowledge of specialized fields through career preparation for positions in areas such as advertising and promotion, marketing management, marketing research, logistics, retailing and distribution, sales and sales management, and other positions leading to careers in management.

The multifaceted hospitality industry includes lodging, food services, and tourist-related businesses. The HSA program goal is to provide undergraduate students with a sound business background and a specific orientation toward the management of lodging operations, restaurants, clubs, and tourism. Coursework includes accounting, finance, management, marketing, and facility operations as they relate to the hospitality industries. Students also gain practical experience via required internships in marketing and hospitality.

### The Faculty

Concha Allen, Hayem Alnakhl, Steven Dahlquist, Rebecca Dingus, Richard Divine (Chair), Gary Gagnon, Michael Garver, Sean Goffnett, Deborah Gray, Jeffrey Hoyle, Nizar Hussein, Frederick Lawrence, Obinna Obilo, Yae Roh, Evelyn Smith, Mark Spieles, Samuel Spralls III, James Taelman, Crina Tarasi, J. Holton Wilson, Matthew Wilson, Leah Wolf

## Majors

Majors in this department are available only to students pursuing the Bachelor of Science in Business Administration degree. Courses taken on a Credit/No Credit basis are not accepted on the Marketing major or minor.

### Hospitality Services Administration Major: Hospitality Services Concentration

*B.S. in B.A. degree*

Students may elect to study the Hospitality Services concentration.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Hospitality Services Administration:

See an advisor in the Department of Marketing, Hospitality, and Logistics. To register for most of the courses on the major students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

Credit/No Credit coursework will not count on any major within the Department of Marketing, Hospitality, and Logistics.

#### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)

MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

#### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)

BUS 503QR - Applied Lean Six Sigma 3(3-0)

#### Core Courses (18 hours)

HSA 210/MGT 210 - Effective Supervision: Principles and Practices 3(3-0)

HSA 240 - Introduction to Hospitality Services Administration 3(3-0)

HSA 350 - Lodging Operations 3(3-0)

HSA 447 - Financial Management in the Hospitality Service Sector 3(3-0)

HSA 490 - Hospitality Internship 3(Spec)

HSA 546 - Management in the Hospitality Service Sector 3(3-0)

#### Electives (9-10 hours)

Select from the following with advisor approval:

FIN 335 - Real Estate Principles 3(3-0)

HSA 120 - Introduction to the Gaming Industry 3(3-0)

HSA 341/MKT 341 - Services Marketing 3(3-0)

HSA 348 - Franchising 3(3-0)

HSA 390 - Field Studies in Hospitality Services Administration 3(3-0)

HSA 397 - Special Topics 1-6(Spec)

HSA 445 - Advanced Food and Beverage Systems Management 3(3-0)

HSA 597 - Special Topics 1-6(Spec)

MKT 340 - Personal Selling 3(3-0)

NDS 160 - Introduction to Food and Culinary Techniques 3(2-2)

**Total: 36-37 semester hours**

## Logistics Management Major

*B.S. in B.A. degree*

The Logistics Management major is designed to prepare CMU College of Business Administration students for a career in the field of logistics. Logistics Management is concerned with the effective and efficient movement and storage of products from raw material source through production to the consumer. Attention is focused on the integration and management of several areas including: transportation, inventory, warehousing, packaging and materials handling, logistics information and customer service. As managers of logistics, graduates will be responsible for providing customers with the right product at the right place at the right time at an acceptable price. Students who complete this major will find a growing number of job opportunities in the areas listed above.

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Logistics Management:

See an advisor in the Department of Marketing, Hospitality, and Logistics. To register for most of the courses on the major, students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

Credit/No Credit coursework will not count on any major within the Department of Marketing, Hospitality, and Logistics.

### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)

MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)

BUS 503QR - Applied Lean Six Sigma 3(3-0)

### Required Courses (21 hours)

MGT 333 - Purchasing Management 3(3-0)

MKT 255 - Introduction to Logistics and Physical Distribution 3(3-0)

MKT 305 - Buyer Behavior 3(3-0)

MKT 431 - Logistics Operations 3(3-0)

MKT 432 - Logistics Strategy 3(3-0)

MKT 450 - Marketing Research 3(3-0)

MKT 465 - Supply Chain Management 3(3-0)

### Electives (6 hours)

Select two of the following:

ACC 321 - Managerial Cost Accounting 3(3-0)

BIS 423 - Decision Support Systems & Business Intelligence 3(3-0)

FIN 442 - Intermediate Financial Management 3(3-0)

GEO 317 - Economic Geography 3(3-0)

GEO 320 - Population Geography 3(3-0)

MGT 446 - Industrial Relations 3(3-0)

MKT 310 - Marketing Communications 3(3-0)

MKT 320 - Retail Management 3(3-0)

MKT 340 - Personal Selling 3(3-0)

MKT 490 - Internship in Marketing/Logistics 3-6(Spec)

MKT 555 - Market and Sales Forecasting 3(3-0)

MKT 560 - International Marketing 3(3-0)

**Total: 36 semester hours**

## Marketing Major

*B.S. in B.A. degree*

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Marketing:

See an advisor in the Department of Marketing, Hospitality, and Logistics. To register for most of the courses on the major students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

Credit/No Credit coursework will not count on any major within the Department of Marketing, Hospitality, and Logistics.

### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)

MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)

BUS 503QR - Applied Lean Six Sigma 3(3-0)

### Core Courses (18 hours)

MKT 255 - Introduction to Logistics and Physical Distribution 3(3-0)

MKT 305 - Buyer Behavior 3(3-0)

MKT 310 - Marketing Communications 3(3-0)

MKT 450 - Marketing Research 3(3-0)

MKT 490 - Internship in Marketing/Logistics 3-6(Spec)

MKT 499 - Strategic Marketing Problems 3(3-0)

### Planned Program Courses (6 hours)

Select two of the following:

MKT 315 - Advertising Media 3(3-0)

MKT 320 - Retail Management 3(3-0)

MKT 325 - Merchandising Management 3(3-0)

MKT 340 - Personal Selling 3(3-0)

MKT 341/HSA 341 - Services Marketing 3(3-0)

MKT 360 - Electronic Commerce and Marketing Strategy 3(3-0)

MKT 425 - Retail Strategy 3(3-0)

MKT 431 - Logistics Operations 3(3-0)

MKT 432 - Logistics Strategy 3(3-0)

MKT 440 - Sales Management 3(3-0)

MKT 555 - Market and Sales Forecasting 3(3-0)

MKT 560 - International Marketing 3(3-0)

Students must complete the Planned Program (6 hours) approved by the MHSA faculty advisor **OR** must complete the Professional Sales concentration (next page).

### Total: 33 semester hours

Students must complete the Planned Program (6 hours) approved by the MHSA faculty advisor **OR** must complete the Professional Sales concentration:

## Marketing Major: Professional Sales Concentration

*B.S. in B.A. degree*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major in Marketing:

See an advisor in the Department of Marketing, Hospitality, and Logistics. To register for most of the courses on the major students must be admitted to the Bachelor of Science in Business Administration (BSBA). Please see the bulletin for course prerequisites.

Credit/No Credit coursework will not count on any major within the Department of Marketing, Hospitality, and Logistics.

#### Common Body of Knowledge Courses I (6 hours)

BUS 100 - Essential Business Skills 3(3-0)

MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

#### Common Body of Knowledge Courses II (3 hours)

Select one of the following:

BUS 351QR - Applied Business Analytics 3(3-0)

BUS 503QR - Applied Lean Six Sigma 3(3-0)

#### Core Courses (18 hours)

MKT 255 - Introduction to Logistics and Physical Distribution 3(3-0)

MKT 305 - Buyer Behavior 3(3-0)

MKT 310 - Marketing Communications 3(3-0)

MKT 450 - Marketing Research 3(3-0)

MKT 490 - Internship in Marketing/Logistics 3-6(Spec)

MKT 499 - Strategic Marketing Problems 3(3-0)

#### Required Courses I (12 hours)

MKT 340 - Personal Selling 3(3-0)

MKT 420 - Advanced Selling and Negotiation 3(3-0)

MKT 440 - Sales Management 3(3-0)

MKT 460 - Organizational Selling 3(3-0)

**Total: 39 semester hours**

## Purchasing and Supply Management Major

*B.S. in B.A. degree*

This is an interdepartmental major. Please check the index for the page number.

## Minors

Courses taken on a Credit/No Credit basis are not accepted on Marketing/Hospitality department minors. No more than a total of 27 hours may be taken in the College of Business Administration and counted toward graduation unless the student is majoring in the College of Business Administration.

## Hospitality Services Administration Minor

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

The HSA minor is designed primarily for students who will work in a field closely allied with the hospitality services industry. Two such fields are commercial recreation and food service administration. This minor is not designed to prepare students for a career in hospitality services, but is designed to introduce the student to the field in a rigorous fashion. The student will also acquire an understanding of how hospitality services administration interacts with the students' major field of study. Students should not expect the HSA minor to make them competitive with students whose majors are in hospitality services administration for managerial positions in the hospitality services industry.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Hospitality Services Administration:

See an advisor in the Department of Marketing, Hospitality, and Logistics and bring along a copy of your signed major.

1. At least 15 hours beyond their major requirements are required for business majors.
2. Transfer students must have completed one semester at CMU,
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

#### Required Courses I (3 hours)

Select one of the following:

ECO 201 - Principles of Macroeconomics 3(3-0)

ECO 204 - Principles of Macro- and Global Economics 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

MGT 258 - Effective Management of Human Resources in Organizations 3(3-0)

MGT 312 - Introduction to Management 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:

MKT 300 - Introduction to Marketing 3(3-0)

MKT 304 - Integrated Marketing Management 3(3-0)

#### Electives I (9 hours)

Select three of the following:

HSA 120 - Introduction to the Gaming Industry 3(3-0)

HSA 210/MGT 210 - Effective Supervision: Principles and Practices 3(3-0)

HSA 331 - Hospitality Industry Information Systems 3(3-0)

HSA 341/MKT 341 - Services Marketing 3(3-0)

HSA 343/RPL 343 - Tourism 3(3-0)

HSA 344 - Legal Aspects of Hospitality Services 3(3-0)

HSA 348 - Franchising 3(3-0)

HSA 350 - Lodging Operations 3(3-0)

HSA 445 - Advanced Food and Beverage Systems Management 3(3-0)

HSA 447 - Financial Management in the Hospitality Service Sector 3(3-0)

HSA 546 - Management in the Hospitality Service Sector 3(3-0)

#### Electives II (6 hours)

Select from the following (these electives may be used to fulfill prerequisites for HSA courses selected in consultation with an advisor from the following list. If electives are not required for use as prerequisites for HSA courses, other electives may be taken in consultation with the advisor.):

ACC 201 - Concepts of Financial Accounting 3(3-0)

ACC 202 - Concepts of Managerial Accounting 3(3-0)

ACC 250 - Introduction to Financial Accounting 3(3-0)

ACC 255 - Managerial Accounting & Decision Making 3(3-0)

BIS 221 - Computers In Business I 3(3-0)

BIS 255 - Information Systems 3(3-0)

BLR 202 - Legal Environment of Business 3(3-0)

BLR 235 - Business Law 3(3-0)

NDS 160 - Introduction to Food and Culinary Techniques 3(2-2)

**Note:** You may count either ACC 201 or 250, not both; you may count either ACC 202 or 255, not both; you may count either BIS 221 or 255, not both; you may count either BLR 202 or 235, not both.

**Total: 24 semester hours**



## Marketing Minor

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

The minor in Marketing is designed for students who plan a career closely allied to marketing, but do not intend to work in marketing itself. Examples of such careers include broadcasting, commercial art, journalism, human environmental studies, or a related business area. The marketing minor provides an overview of the marketing process but does not deal with all of the analytical and managerial skills necessary for success in marketing. The student will be exposed to both the process of stimulating and satisfying demand through the marketing process. Students should not expect that the marketing minor will make them competitive with marketing majors for marketing positions in industry.

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Marketing:

See an advisor in the Department of Marketing, Hospitality, and Logistics after declaring your major.

1. At least 15 hours beyond their major requirements are required for business majors.
2. At least 56 credit hours earned is required.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

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### Required Courses I (3 hours)

MKT 305 - Buyer Behavior 3(3-0)

### Required Courses II (3 hours)

Select one of the following:

MKT 300 - Introduction to Marketing 3(3-0)  
MKT 304 - Integrated Marketing Management 3(3-0)

### Electives (15 hours)

Select five of the following:

ECO 202 - Principles of Microeconomics 3(3-0)  
ECO 203 - Microeconomic Principles for Business 3(3-0)  
MKT 255 - Introduction to Logistics and Physical Distribution 3(3-0)  
MKT 310 - Marketing Communications 3(3-0)  
MKT 320 - Retail Management 3(3-0)  
MKT 340 - Personal Selling 3(3-0)  
MKT 341/HSA 341 - Services Marketing 3(3-0)  
MKT 350 - Marketing Analysis 3(3-0)  
MKT 360 - Electronic Commerce and Marketing Strategy 3(3-0)  
MKT 410 - Advertising Management 3(3-0)  
MKT 420 - Advanced Selling and Negotiation 3(3-0)  
MKT 431 - Logistics Operations 3(3-0)  
MKT 435 - Transportation 3(3-0)  
MKT 440 - Sales Management 3(3-0)  
MKT 450 - Marketing Research 3(3-0)  
MKT 555 - Market and Sales Forecasting 3(3-0)  
MKT 560 - International Marketing 3(3-0)

**Note:** You may count either ECO 202 or ECO 203, but not both.

**Total: 21 semester hours**

## Professional Sales Minor

*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

The Professional Sales minor will prepare students for careers in business-to-business sales.

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a minor in Professional Sales:

See an advisor in the Department of Marketing, Hospitality, and Logistics after declaring your major.

1. At least 15 hours beyond their major requirements are required for business majors.
2. Transfer students must have completed one semester at CMU.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.
4. Students with a signed major in Marketing (regardless of concentration) are not allowed to declare a minor in Professional Sales.

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### Required Courses I (3 hours)

Select one of the following:

BIS 100 - Introduction to Business 3(3-0)  
BUS 100 - Essential Business Skills 3(3-0)

### Required Courses II (3 hours)

Select one of the following:

BIS 101WI - Essential Business Communications Skills 3(3-0)  
BIS 360WI - Applied Business Communication 3(3-0)

### Required Courses III (3 hours)

Select one of the following:

MKT 300 - Introduction to Marketing 3(3-0)  
MKT 304 - Integrated Marketing Management 3(3-0)

### Required Courses IV (12 hours)

MKT 340 - Personal Selling 3(3-0)  
MKT 420 - Advanced Selling and Negotiation 3(3-0)  
MKT 440 - Sales Management 3(3-0)  
MKT 460 - Organizational Selling 3(3-0)

**Total: 21 semester hours**

## Advertising Minor

This is an interdepartmental minor. Please check the index for the page number.

# College of Education and Human Services

**Paula Lancaster, Ph.D., Dean**  
**Megan Goodwin, Ph.D., Associate Dean**  
**EHS 426, 989-774-3079; [ehs@cmich.edu](mailto:ehs@cmich.edu)**  
**[www.ehs.cmich.edu](http://www.ehs.cmich.edu)**

*"The College of Education and Human Services leads the way in educator preparation and human services programs, where students, faculty and staff learn to challenge, lead and inspire the world. Our vision is to strive to be a diverse academic community nationally recognized for its leaders, scholars and innovative professionals."*

## Introduction

The primary mission of the College of Education and Human Services (EHS) is to provide the highest quality undergraduate and graduate educational experiences that develop effective professionals, critical thinkers, and lifelong learners. Students will expand their understanding of themselves and their roles in a diverse and global society. Through a broad range of technological and human services, the College and its graduates, in collaboration with the constituencies they serve, will be proactive forces for improving the quality of life in the twenty-first century.

We believe that involvement in the field, prior to graduation, is a critical component of all of our programs so that students have an opportunity to apply classroom learning in real-life settings. Whether you are interested in one of our applied professional programs such as teaching, fashion design and merchandising, interior design, child development, family studies, leadership or recreation or are still exploring the right program for you, know that our faculty and staff are committed to assisting you to achieve your academic goals.

## Teaching-Related Programs

The process of becoming a certified teacher in Michigan starts when you enter CMU and declare your intent to focus on that area. Advising is a critical component for all education students; some courses may be counted in different types of ways to meet various curricular requirements. Meeting with your advisor and mentor regularly is important.

The Department of Teacher and Special Education prepares students for certification in elementary and secondary education through its professional education courses. Other teaching majors and minors are located in departments across the university.

CMU is accredited by the Teacher Education Accreditation Council (TEAC) and approved by the Michigan Department of Education. CMU is expected to meet high standards for all of our professional education programs.

## Human Service-Related Programs

An array of Human Service programs is offered through EHS. If you see yourself interacting with people in a professional capacity, or think you would like a career in a business or a human service agency setting working with clients face-to-face to help them in meeting their needs, you should explore human service-related programs in EHS.

Several of our human services programs have earned national accreditation confirming that the program meets high standards for academic quality. These include: Early Childhood Development and Learning, accredited by the National Association for the Education of Young Children, Interior Design, accredited by the Council for Interior Design Accreditation and the National Association of Schools of Art and Design, and Recreation, accredited by the Council on Accreditation of Parks, Recreation, Tourism and Related Professions.

The Leadership Minor is a 24 credit hour interdisciplinary program. The major objective of the program is to educate students for and about leadership positions in their community and profession. The minor complements a wide variety of academic programs. Contact the Department of Recreation, Parks and Leisure Services Administration at [rpl.cmich.edu](http://rpl.cmich.edu), 989-774-3858 or see an advisor in Finch 214.

## Applied Experiences

All professional degree programs include carefully designed, direct experiences in real-life settings. These required experiences, which differ from program to program, have one common element - close contact with people with whom you will work as a professional.

Much of the hands-on experience in EHS takes place in the many clinics and centers that provide service to the university and the community at large. These clinics include: the Child Development and Learning Laboratory, the Center for Community Counseling and Development and the Literacy Clinic. College centers and related offices are: Center for Leisure Services, Center for Excellence in STEM Education, Center for Merchandising and Design Technology, Office of Educator Preparation Programs and the Governor John Engler Center for Charter Schools.

## Residential College

The Education and Human Services Residential College (EHSRC) is a community that supports freshmen and transfer students who are pursuing education and human service related professions. Located in Sweeney Residence Hall, this unique living-learning environment offers a friendly, supportive community and provides each student with opportunities to excel as an individual and as part of a team focusing on academics, community building, volunteer service, leadership and professional development. For more information about the EHS Residential College visit their web page at [ehs.cmich.edu/ehsrc](http://ehs.cmich.edu/ehsrc).

## Student Organizations

The College is home to more than 25 student organizations, honors societies, and service clubs. These organizations provide opportunities for students to interact with other students with shared interests, learn from practicing professionals, and prepare for a career in one's chosen field. More information about these organizations and their activities are available in the department offices.

## Graduate Programs

Graduate programs are offered in four departments within EHS, as well as an Interdisciplinary Masters of Arts in Education and a Master of Science in Administration. The department of Counseling, Educational Leadership, and Special Education offers doctorate degrees in Educational Leadership, a specialist degree in General Education Administration, and master's degrees in Higher Education Administration and Education Leadership, and a Graduate Certificate in College Teaching, as well as master's level programs in Addiction Counseling, Clinical Mental Health Counseling, and School Counseling. Fashion, Interior Design, and Merchandising offers a master's degree in Apparel Product Development & Merchandising Technology. Teacher and Special Education offers master's degrees in Reading and Literacy K-12; Learning, Design, and Technology; a doctorate in Educational Technology; and a master's in Special Education: The Master Teacher.

## **Counseling, Educational Leadership, and Higher Education (CED, EDL, HED)**

For information, please contact the chairperson, 989-774-3204, EHS 321;  
<https://www.cmich.edu/academics/colleges/college-education-human-services/departments/educational-leadership>

### **Why Study Educational Leadership?**

Leadership skills are vital to all academic and community institutions. Because the Department of Educational Leadership provides leadership preparation programs, our students are virtually all at or near graduate level in studies. If you are interested in a career as an elementary, secondary, or higher education administrator, leader of a voluntary organization or community agency, or simply want to increase your administrative skills, you will definitely want to discuss your plans with a member of the department's faculty.

### **Educational Leadership at CMU**

The department offers master's degrees in Educational Leadership, Higher Education Administration, a Specialist in General Education Administration, and a Doctor of Education in Educational Leadership, as well as a Graduate Certificate in Equity-Centered Teaching and Learning. The Specialist degree provides students an opportunity to enhance their leadership skills in a field-based academic program. The Doctor of Education degree in educational leadership assists experienced leaders to achieve the level of practitioner scholar and to provide strong organizational leadership. Some programs are offered through CMU Online only.

See the Graduate Bulletin for a complete description of graduate programs.

### **Why Study Counseling?**

The study of counseling will help you to develop a knowledge and understanding of individual differences, life span issues and working with others. The programs offered emphasize working with clients and students as individuals within a group setting and serving them throughout the life span. All programs provide experiential applications for students. If you are interested in a career in counseling or in improving your skills in these areas, you should discuss your plans with a member of the counseling faculty.

### **Counseling at CMU**

Courses are offered by the counseling program to assist students in personal growth and development, and to prepare graduates for careers as counselors. The department also offers programs leading to a Master of Arts degree, which prepares graduates for positions requiring counseling skills or advanced specialization and/or additional teaching endorsements in the areas of emotional impairment, learning disabilities, autism, and cognitive impairment at the K-12 level. See the Graduate Bulletin for a complete description of graduate programs.

### **The Faculty**

Ellen Armbruster, Allison Arnekrans, Eric Buschlen, Kimberly Childers, Gregg Dionne, Patrick Faircloth, Anne Hornak, Benjamin Jankens, Matthew Johnson, Sarah Marshall, Reuben Mwangi, Sheri Pickover, Tobi Russell, Pam Sickinger, Michael Verona, Georgina Wilson

## Fashion, Interior Design, and Merchandising (FMD, IND)

For information, please contact the chairperson, 989-774-5486, WI 205

<https://www.cmich.edu/academics/colleges/college-education-human-services/departments/DIFM/fashion-merchandising-design>

### Why Study Fashion, Interior Design, and Merchandising?

The areas are focused on the preparation of students for a variety of careers in the fields of fashion, interior design, and merchandising. Central to our mission is the application of technology to the design and merchandising process and the dissemination of original research and creative endeavors that expands the current body of knowledge related to our disciplines.

### Fashion, Interior Design, and Merchandising at CMU

Majors offered within the department of Fashion, Interior Design, and Merchandising include: Fashion Merchandising and Design and Interior Design. Minors include: Fashion Design, Visual Merchandising, and Interior Design. All programs are accredited by the National Association for Schools of Art and Design (NASAD), and the Interior Design program is also accredited by the Council for Interior Design Accreditation (CIDA).

The department offers an online major in Fashion Merchandising and Design with concentrations in Visual Merchandising, Fashion Buying, and Product Development.

Also available is a Master of Science in Apparel Product Development and Merchandising Technology. For more information about this program, consult the *Graduate Studies Bulletin*.

Transfer students seeking a major must complete a minimum of 12 credit hours at CMU. Transfer students seeking a minor must complete a minimum of 9 credit hours at CMU.

### The Faculty

Su An, Usha Chowdhary, Sylvia Coon, Tanya Domina, Elizabeth Embrey, Pimpawan Kumphai, Seung-Eun Lee, Ian Mull, Thamizhisai Periyaswamy, Jihyun Sung, Jeanneane Wood-Nartker, Julie Qun Zuo

## Fashion Merchandising and Design

### Fashion Merchandising and Design Major: Fashion Design and Fashion Merchandising Concentrations

*B.A.; B.A.A.; B.S. degrees*

The purpose of the major is to study textiles, fashion design, and merchandising. The major is planned to prepare students for a variety of professional careers in the fashion and textile industry. Career possibilities are available in the design, production, and distribution of fashion and textile products.

The major includes a fashion merchandising and design core of 35 hours, plus additional required courses in each of the concentrations of fashion design or fashion merchandising.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Student must have a minimum GPA of 2.0 to declare a major.
2. Student must achieve a grade of C or better in all major courses in order to graduate with this major.
3. In order to enroll in a major course, student must have achieved a C or better in the required major prerequisite course(s).

**International Experience:** Students may substitute up to 12 credit hours on the major through participation in a study abroad or an international internship experience subject to the pre-approval of the major advisor. Students who substitute major course requirements must receive a C or better.

#### Core Courses (35 hours)

FMD 141 - Fashion Fundamentals 3(2-2)  
FMD 155 - Introduction to Textiles 3(2-2)  
FMD 246 - CAD for Fashion Design and Merchandising 3(0-4)  
FMD 250 - History of Western Dress 3(3-0)  
FMD 252 - Dress and Culture 3(3-0)  
FMD 256 - Introduction to Fashion Industry 3(3-0)  
FMD 258 - Fashion Retail Management 3(3-0)  
FMD 330 - Preprofessional Seminar in Fashion Merchandising and Design 2(2-0)

FMD 346 - Advanced CAD for Apparel 3(0-4)

FMD 355QR - Textile Analysis 3(2-2)

FMD 401 - Internship in Fashion Merchandising and Design 3(Spec)

FMD 560 - Apparel Product Development 3(1-3)

#### Concentrations

Select one of the following concentrations:

#### Fashion Design Concentration

##### Required Courses (18 hours)

FMD 140 - Introduction to Clothing Construction and Design 3(0-6)

FMD 241 - Digital Fashion Illustration 3(1-3)

FMD 245 - Fashion Design Methods 3(0-6)

FMD 345 - Draping Fundamentals 3(0-6)

FMD 347 - Digital Pattern Development and Virtual Fit 3(1-3)

FMD 447 - Collection Development 3(0-6)

##### Electives (3 hours)

Select one of the following:

FMD 225 - Fashion in Paris 3(Spec)

FMD 437 - Digital Technologies and Craftsmanship for Apparel Design 3(0-6)

FMD 545 - Advanced Draping 3(0-6)

FMD 546 - Experimental CAD for Fashion 3(1-3)

FMD 547 - Functional Apparel Design 3(2-2)

FMD 555 - Electronic Textiles 3(1-3)

FMD 565 - 3D Printing and Fashion 3(1-3)

FMD 597 - Special Topics in Fashion Merchandising and Design 1-15(Spec)

**Total: 56 semester hours**

#### Fashion Merchandising Concentration

##### Required Courses (12 hours)

FMD 200 - Apparel Prototype and Quality Analysis 3(3-0)

FMD 325QR - Merchandising Mathematics & Spreadsheet Applications 3(3-0)

FMD 356 - Visual Merchandising 3(1-3)

FMD 410 - Fashion Advertising and Promotion 3(3-0)

(continued)



**Electives (9 hours)**

Select three of the following:

- FMD 225 - Fashion in Paris 3(Spec)
- FMD 326 - Fashion Styling & Digital Communication 3(1-3)
- FMD 350 - Professional Study Tour 1-3(Spec)
- FMD 357 - Fashion Show Production and Promotion 3(Spec)
- FMD 395 - Business Intelligence for Fashion Buying and Operation 3(3-0)
- FMD 456 - CAD for Visual Merchandising and Presentation 3(0-4)
- FMD 510 - Luxury Fashion Brand Management 3(3-0)
- FMD 546 - Experimental CAD for Fashion 3(1-3)
- FMD 555 - Electronic Textiles 3(1-3)
- FMD 556 - Advanced Visual Merchandising 3(1-3)
- FMD 565 - 3D Printing and Fashion 3(1-3)

**Total: 56 semester hours**

## **Fashion Merchandising and Design Major: Fashion Buying Concentration, Product Development Concentration, and Visual Merchandising Concentration**

*B.A.A., B.S. Degrees*

The purpose of the major is to study visual merchandising, product development, or fashion buying. The major is planned to prepare students for a variety of professional careers in the apparel, fashion and textile industry. Career possibilities are available in the production, distribution, and buying of apparel fashion and textile products. The major includes the required courses in the core plus additional required courses in each of the concentrations of visual merchandising, product development, or fashion buying. Students may also complete a double concentration.

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### **ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

1. Student must have a minimum GPA of 2.0 to declare a major.
  2. Student must achieve a grade of C or better in all major courses in order to graduate with this major.
  3. In order to enroll in a major course, student must have achieved a C or better in the required major prerequisite course(s).
- 

**Core Courses (20 hours)**

- FMD 141 - Fashion Fundamentals 3(2-2)
- FMD 155 - Introduction to Textiles 3(2-2)
- FMD 246 - CAD for Fashion Design and Merchandising 3(0-4)
- FMD 250 - History of Western Dress 3(3-0)
- FMD 252 - Dress and Culture 3(3-0)
- FMD 256 - Introduction to Fashion Industry 3(3-0)
- FMD 330 - Preprofessional Seminar in Fashion Merchandising and Design 2(2-0)

**Concentrations**

Select one or more of the following:

**Fashion Buying Concentration (24 hours)****Required Courses (18 hours)**

- FMD 200 - Apparel Prototype and Quality Analysis 3(3-0)
- FMD 258 - Fashion Retail Management 3(3-0)
- FMD 325QR - Merchandising Mathematics & Spreadsheet Applications 3(3-0)
- FMD 395 - Business Intelligence for Fashion Buying and Operation 3(3-0)
- FMD 410 - Fashion Advertising and Promotion 3(3-0)
- FMD 510 - Luxury Fashion Brand Management 3(3-0)

**Electives (6 hours)**

Select two of the following:

- FMD 225 - Fashion in Paris 3(Spec)
- FMD 326 - Fashion Styling & Digital Communication 3(1-3)
- FMD 346 - Advanced CAD for Apparel 3(0-4)
- FMD 355QR - Textile Analysis 3(2-2)
- FMD 356 - Visual Merchandising 3(1-3)
- FMD 401 - Internship in Fashion Merchandising and Design 3(Spec)
- FMD 456 - CAD for Visual Merchandising and Presentation 3(0-4)
- FMD 546 - Experimental CAD for Fashion 3(1-3)

**Total: 44 semester hours**

**Product Development Concentration (24 hours)****Required Courses (21 hours)**

- FMD 200 - Apparel Prototype and Quality Analysis 3(3-0)
- FMD 241 - Digital Fashion Illustration 3(1-3)
- FMD 346 - Advanced CAD for Apparel 3(0-4)
- FMD 347 - Digital Pattern Development and Virtual Fit 3(1-3)
- FMD 355QR - Textile Analysis 3(2-2)
- FMD 560 - Apparel Product Development 3(1-3)
- FMD 565 - 3D Printing and Fashion 3(1-3)

**Electives (3 hours)**

Select one of the following:

- FMD 225 - Fashion in Paris 3(Spec)
- FMD 258 - Fashion Retail Management 3(3-0)
- FMD 280/WGS 280 - Queer Fashion 3(3-0)
- FMD 325QR - Merchandising Mathematics & Spreadsheet Applications 3(3-0)
- FMD 326 - Fashion Styling & Digital Communication 3(1-3)
- FMD 401 - Internship in Fashion Merchandising and Design 3(Spec)
- FMD 410 - Fashion Advertising and Promotion 3(3-0)
- FMD 510 - Luxury Fashion Brand Management 3(3-0)
- FMD 546 - Experimental CAD for Fashion 3(1-3)

**Total: 44 semester hours**

**Visual Merchandising Concentration (24 hours)****Required Courses (18 hours)**

- FMD 258 - Fashion Retail Management 3(3-0)
- FMD 326 - Fashion Styling & Digital Communication 3(1-3)
- FMD 356 - Visual Merchandising 3(1-3)
- FMD 410 - Fashion Advertising and Promotion 3(3-0)
- FMD 456 - CAD for Visual Merchandising and Presentation 3(0-4)
- FMD 556 - Advanced Visual Merchandising 3(1-3)

**Electives (6 hours)**

Select two of the following:

- FMD 200 - Apparel Prototype and Quality Analysis 3(3-0)
- FMD 225 - Fashion in Paris 3(Spec)
- FMD 241 - Digital Fashion Illustration 3(1-3)
- FMD 280/WGS 280 - Queer Fashion 3(3-0)
- FMD 325QR - Merchandising Mathematics & Spreadsheet Applications 3(3-0)
- FMD 346 - Advanced CAD for Apparel 3(0-4)
- FMD 395 - Business Intelligence for Fashion Buying and Operation 3(3-0)
- FMD 401 - Internship in Fashion Merchandising and Design 3(Spec)
- FMD 510 - Luxury Fashion Brand Management 3(3-0)
- FMD 546 - Experimental CAD for Fashion 3(1-3)
- FMD 565 - 3D Printing and Fashion 3(1-3)

**Total: 44 semester hours**

## Fashion Design Minor

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

This minor focuses on methods of fashion design and is intended for students who want to learn how to design fashion apparel. The minor is planned to prepare students for a number of careers in the fashion industry that require competence in apparel construction and design, flat pattern and draping.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students majoring in FMD with a Design Concentration are not eligible for this minor.
2. Students majoring in FMD with a Merchandising Concentration are eligible for this minor, but must complete FMD 241. Six (6) credits from their major will count toward the Fashion Design Minor.
3. Students must achieve a C or better in all minor courses in order to graduate with this minor.
4. In order to enroll in a minor course, student must have achieved a C or better in the required minor prerequisite course.

### Required Courses I (12 hours)

FMD 140 - Introduction to Clothing Construction and Design 3(0-6)  
 FMD 141 - Fashion Fundamentals 3(2-2)  
 FMD 155 - Introduction to Textiles 3(2-2)  
 FMD 245 - Fashion Design Methods 3(0-6)

### Required Courses II (3 hours)

Select one of the following:

FMD 241 - Fashion Design: Illustration 3(0-4)  
 FMD 246 - CAD for Fashion Design and Merchandising 3(0-4)

### Required Courses III (3 hours)

Select one of the following:

FMD 345 - Draping Fundamentals 3(0-6)  
 FMD 347 - Digital Pattern Development & Virtual Fit 3(0-6)

### Electives (3 hours)

Select one of the following:

FMD 225 - Fashion in Paris 3(Spec)  
 FMD 437 - Digital Technologies and Craftsmanship for Apparel Design 3(0-6)  
 FMD 447 - Collection Development 3(0-6)  
 FMD 545 - Advanced Draping 3(0-6)  
 FMD 565 - 3D Printing and Fashion 3(1-3)  
 FMD 597 - Special Topics in Fashion Merchandising and Design 1-15(Spec)

**Total: 21 semester hours**

## Visual Merchandising Minor

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

Effective Visual Merchandising allows for an integration of the art and science in the merchandising process, resulting in compelling presentations that influence consumer purchase intention. This minor is intended to complement a wide variety of majors such as Event Management, Public Relations, Advertising, Marketing, and Art. The minor coursework provides an aesthetic foundation and general knowledge of the fashion industry. Additionally, students will learn current technology used by Visual Merchandisers. This minor is appropriate for those interested in careers as visual merchandisers, art directors, stylists, display artists, event planners and entrepreneurs.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students majoring in Fashion Merchandising and Design with a Fashion Merchandising or Visual Merchandising Concentration are not eligible for this minor.
2. Students majoring in Fashion Merchandising and Design with a Fashion Design or Product Development Concentration are eligible for this minor. Nine (9) credits from their major (FMD 141, 246, 256) will count toward the Visual Merchandising Minor.
3. Students must achieve a C or better in all minor courses in order to graduate with this minor.
4. In order to enroll in a minor course, student must have achieved a C or better in the required minor prerequisite course.

### Required Courses (21 hours)

FMD 141 - Fashion Fundamentals 3(2-2)  
 FMD 246 - CAD for Fashion Design and Merchandising 3(0-4)  
 FMD 256 - Introduction to Fashion Industry 3(3-0)  
 FMD 326 - Fashion Styling & Digital Communication 3(1-3)  
 FMD 356 - Visual Merchandising 3(1-3)  
 FMD 456 - CAD for Visual Merchandising and Presentation 3(0-4)  
 FMD 556 - Advanced Visual Merchandising 3(1-3)

**Total: 21 semester hours**

## Interior Design

### Interior Design Major

*B.A.; B.A.A.; B.S. degrees*

The Interior Design Program involves the detailed design of interior environments, drawing on diverse knowledge from various disciplines emphasizing an integrated approach that relates interior design to society and architecture. Students will understand the design principles and processes with opportunities to demonstrate how social, economic, cultural, and physical contexts inform their decision making. The program prepares students to be effective professionals, communicators, critical thinkers, and lifelong learners and maintains strong relationships with professional practice. The Program provides exposure to qualified role models in interior design through field trips and guest speakers.

The Program is nationally accredited by the Council for Interior Design Accreditation (CIDA) and the National Association for Schools of Art and Design (NASAD). Students are prepared to excel in a wide range of careers including commercial, residential, healthcare, and related areas. A sequence of creative design studios is supported by both theoretical and technical courses and students learn both traditional and digital visual presentation formats.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students must achieve a cumulative 2.7 program GPA or better to graduate with this major.
2. In order to enroll in a major course, students must achieve a C or higher in the required prerequisite course(s) and all required courses to graduate with this major.
3. A limit of 18 credit hours of 100 and 200 level courses in Interior Design may be transferred to CMU. A visual review of student work is required for courses transferring as IND credit.
4. It is recommended that interior design majors have access to a computer that will support program software for use in interior design courses. The most recent technical requirements can be found by clicking on the Computer Recommendations Tab on the Interior Design program web page located at <https://www.cmich.edu/academics/colleges/college-education-human-services/departments/DIFM/interior-design/computer-requirements>.
5. An Interior Design program fee may be charged in semesters preceding an accreditation visit.

### Notes:

- ART 285 fulfills the University Program Group I-A requirement; IND 332WI satisfies the University Program Group III-A requirement; IND 238 satisfies the University Program Group I-B requirement and may be offered as Writing Intensive--check Course Registration for sections offered as WI.
- The Interior Design program has the right to request any student's work for display, publication or permanent use. The department provides minimal supplies and equipment. Students are expected to purchase most of their personal project materials.
- Suggested Minors (20-24 hours): Art, Art History, Business Administration, Child Development, Entrepreneurship, Event Management, History, Hospitality Services Administration, Journalism, Management, Marketing, Multimedia Design, Museum Studies, Professional Sales, Psychology, Real Estate: Development and Finance, Sociology.

**Foundational Courses I (3 hours)**

Select one of the following:

ART 119 - Design Foundations 3(0-6)

ART 202 - Introduction to Digital Fabrication 3(0-6)

**Foundational Courses II (3 hours)**

Select one of the following:

ART 106 - Introduction to Drawing 3(0-6)

IND 132 - Drawing for Interiors 3(2-2)

**Note:** Art minors should select ART 106.

**Foundational Courses III (3 hours)**

Select one of the following:

ART 231 - Introduction to Graphic Design 3(0-6)

IND 134 - Digital Fundamentals for Interior Design 3(1-3)

**Note:** Art Minors should select ART 231.

**Required Courses (63 hours)**

ART 285 - Introduction to Western Art, Part II 3(3-0)

IND 109 - Architectural Drafting 3(2-2)

IND 131 - Interior Design Studio I: Introduction 3(1-4)

IND 138 - Visual Communication for Interior Design 3(2-2)

IND 155 - Introduction to Textiles 3(2-2)

IND 234 - Computer Modeling 3(2-2)

IND 238 - Design History and Precedent 3(3-0)

IND 326 - Building Systems 3(2-2)

IND 328 - Design History and Criticism 3(3-0)

IND 332WI - Human Shelter and Environment 3(3-0)

IND 335 - Contract Documents 3(2-2)

IND 336 - Materials and Components of Interior Design 3(3-0)

IND 337 - Interior Design Studio II: Residential 3(1-4)

IND 338 - Professional Preparation for Interior Design 1(0-2)

IND 339WI - Interior Design Studio III: Special User Groups 3(1-4)

IND 432WI - Seminar in Interior Design 3(3-0)

IND 433 - Professional Practices in Interior Design 3(3-0)

IND 434 - Advanced CAD for Interiors 3(2-2)

IND 436QR - Lighting Design 3(2-2)

IND 437 - Interior Design Studio IV: Hospitality & Retail Design 3(1-4)

IND 438 - Interior Design Internship 2(Spec)

IND 439 - Interior Design Studio V: Senior Project 3(1-4)

**Total: 72 semester hours**

**Interior Design Minor**

*B.A.; B.A.A.; B.S.; B.F.A.; B.S. in B.A. degrees*

This program provides students with the combination of skills and knowledge to successfully complement an existing major or satisfy personal interests in the field of design. This minor is for students who want to develop fundamental knowledge and skills in drafting, visual communications, CAD, materials/components, design history and studio design applications. Students will document their work in a portfolio at the conclusion of their final studio course in IND 338.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

1. No more than 9 credits may transfer toward the minor.
2. Students must achieve a cumulative 2.7 program GPA or better to graduate with this minor.

**Notes:**

IND 332WI satisfies the University Program Group III-A requirement.

IND 238 satisfies the University Program Group I-B requirement and may be offered as WI - check Course Registration for sections offered as WI.

**Required Courses (25 hours)**

IND 109 - Architectural Drafting 3(2-2)

IND 131 - Interior Design Studio I: Introduction 3(1-4)

IND 138 - Visual Communication for Interior Design 3(2-2)

IND 234 - Computer Modeling 3(2-2)

IND 238 - Design History and Precedent 3(3-0)

IND 332WI - Human Shelter and Environment 3(3-0)

IND 336 - Materials and Components of Interior Design 3(3-0)

IND 337 - Interior Design Studio II: Residential 3(1-4)

IND 338 - Professional Preparation for Interior Design 1(0-2)

**Total: 25 semester hours**

## Human Development and Family Studies (HDF)

For information, please contact the chairperson 989-774-3218, EHS 228;

<https://www.cmich.edu/academics/colleges/college-education-human-services/departments/human-development-family-studies>

### Why Study in Human Development and Family Studies?

Human Development and Family Studies prepares students to work with children, individuals, and families across the lifespan, in addition to preparing them for graduate studies in a variety of disciplines. Students will gain an appreciation of the complexity and diversity of individuals, families, and their relationships.

### Human Development and Family Studies at CMU

Majors offered within the department of Human Development and Family Studies include: Child Development, Early Childhood Development and Learning, Family Studies, and two majors in Teaching Early Childhood and Early Special Education (for Birth-Kindergarten or Birth-Third Grade). Minors include: Child Development, Early Childhood Development, and Learning and Family Studies.

Transfer students seeking a major must complete a minimum of 12 credit hours at CMU. Transfer students seeking a minor must complete a minimum of 9 credit hours at CMU.

### The Faculty

Jeff Angera, Bruce Covey, Kimberly Davidson, Tracy Donohue, Jack Day, Cheryl Geisthardt, Megan Goodwin, Holly Hoffman, Chris Latty, Michelle Lee, Joellen Lewsader, Gina McGovern, Polly Pritchard, Tierney Popp, Cheryl Priest

### Child Development Major

*B.A.; B.A.A.; B.S. degrees*

As a Child Development Major at CMU, you'll help youth create a foundation for lifelong success. Whether you want to work with people (prenatal through early adulthood), advocate for the rights of children, become a social worker or counselor, or work with youth in various family and community settings, this program is your foundation for a career lifting others toward successful futures.

Our program prepares students for a range of careers including: early intervention programs, child protective services, after school activities director, and youth development specialist. It may also be used as preparatory training for graduate studies in child development and professional programs in health- and counseling-related fields.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Student must have a minimum program GPA of 2.5 in order to graduate with this major.
2. Student must receive a grade of C+ or better in HDF 219, HDF 319, and HDF 419 in order to graduate with this major.
3. Students who take this major cannot minor in Child Development or double major in Family Studies.
4. Students may only double count 9 credits when combining the Child Development Major with the Family Studies Minor.

#### Core Courses (9 hours)

*Core HDFS*

HDF 100 - Lifespan Development 3(3-0)  
HDF 211 - Marriage and Close Relationships 3(3-0)  
HDF 307 - Parent-Child Relations 3(3-0)

#### Required Courses I (6 hours)

*Development Content*

HDF 308 - Theories of Child and Adolescent Development 3(3-0)  
HDF 510 - Child Development Seminar: Promoting Resilience 3(3-0)

#### Required Courses II (6-7 hours)

*Development Content*

Select two classes from the following:

HDF 302 - Infant and Toddler Development 3(Spec)  
HDF 303 - Early Childhood Development 4(Spec)  
HDF 306 - Adolescent Development 3(3-0)

#### Required Courses III (3 hours)

*Diversity*

Select one of the following:

HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)  
HDF 212 - Families in Cultural Perspective 3(3-0)  
HDF 213/WGS 213 - Introduction to Human Sexuality 3(3-0)  
HDF 320 - HDFS International Service Learning 3-6(Spec)  
HDF 321 - International Reggio-Inspired Early Childhood Learning 3(Spec)  
SPE 585 - Early Childhood Special Education 3(3-0)

#### Required Courses IV (12 hours)

*Professional Skills and Methods*

HDF 207 - Introduction to Research Methods in HDFS 3(3-0)  
HDF 219 - Applied HDFS: Introduction to the Field 3(Spec)  
HDF 319 - Applied HDFS: Developing Programs for Children and Families 3(3-0)  
HDF 419 - Applied HDFS: Internship 1-12(Spec)

#### Required Courses V (3 hours)

*Professional Skills and Application*

Select one of the following:

HDF 301 - Infant Toddler Practicum Experience 1-3(Spec)  
HDF 400 - Developmental Assessment of Children 3(3-0)  
HDF 404 - Children and Hospitalization 3(3-0)  
HDF 414 - Human Development and Family Studies Applied Quantitative Research 3(3-0)  
HDF 505 - Early Childhood Mental Health 3(3-0)  
HDF 506 - Practicum in Parent Involvement 3(2-2)

**Total: 39-40 semester hours**



## Child Development Minor

*B.A., B.A.A., B.S. degrees*

In addition to the major, we offer a minor designed to complement a wide variety of majors selected by students interested in working with children in their social contexts. Some settings may include speech and language pathology, medical settings, family law, counseling, and mental health. Due to the variability in students' goals for completing the minor, all students are encouraged to see an advisor prior to beginning the course work.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students must have a minimum program GPA of 2.5 in order to graduate with this minor.
2. Students who take this minor cannot major in Child Development.
3. Students may only double count 9 credits when combining the Child Development Minor with the Family Studies Major or the Family Studies Minor.

### Core Courses (9 hours)

*Core HDFS*

HDF 100 - Lifespan Development 3(3-0)  
HDF 211 - Marriage and Close Relationships 3(3-0)  
HDF 307 - Parent-Child Relations 3(3-0)

### Required Courses I (6 hours)

*Development Content*

HDF 308 - Theories of Child and Adolescent Development 3(3-0)  
HDF 510 - Child Development Seminar: Promoting Resilience 3(3-0)

### Required Courses II (6-7 hours)

*Development Content*

Select two courses from the following:  
HDF 302 - Infant and Toddler Development 3(Spec)  
HDF 303 - Early Childhood Development 4(Spec)  
HDF 306 - Adolescent Development 3(3-0)

### Required Courses III (3 hours)

*Diversity*

Select one from the following:  
HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)  
HDF 212 - Families in Cultural Perspective 3(3-0)  
HDF 213/WGS 213 - Introduction to Human Sexuality 3(3-0)  
HDF 320 - HDFS International Service Learning 3-6(Spec)  
HDF 321 - International Reggio-Inspired Early Childhood Learning 3(Spec)  
SPE 585 - Early Childhood Special Education 3(3-0)

**Total: 24-25 semester hours**

## Early Childhood Development and Learning Major

*B.A., B.A.A., B.S. degrees*

Early Childhood Development and Learning is a field of study that examines the growth and development of children birth through age eight, within the context of teaching and working with children in educational and social settings. The courses in this major meet the course work requirements for early childhood education and preschool teaching by the Michigan Department of Education and the training guidelines of the National Association for the Education of Young Children (NAEYC), providing students with education, training, and skills to work with children and families from diverse backgrounds. This major is especially appropriate for students who plan on working in non-elementary school early childhood settings such as childcare centers, preschools, Head Start and Early Head Start programs. Students interested in the teaching of young children within the elementary school setting and in early childhood special education should refer to the Teaching Early Childhood majors on the B.S. in Education degree.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Student must have completed or currently be enrolled in HDF 100 or PSY 220 and must have a minimum GPA of 2.0 in order to declare a major.
2. Student must have a minimum program GPA of 2.7 in order to graduate with this major.
3. Student must receive a grade of C+ or better in HDF 302, 303, 402, 403, and 409 in order to graduate with this major.

### Required Courses (3 hours)

Select one of the following:

HDF 100 - Lifespan Development 3(3-0)  
PSY 220 - Developmental Psychology 3(3-0)

### Development and Family Courses (13 hours)

HDF 302 - Infant and Toddler Development 3(Spec)  
HDF 303 - Early Childhood Development 4(Spec)  
HDF 309 - Family and Community Partnerships in Early Childhood 3(3-0)  
HDF 400 - Developmental Assessment of Children 3(3-0)  
HDF 401QR - Quantitative Methods in Childhood Assessment 3(3-0)  
**Note:** you may only count one of HDF 400 or HDF 401QR.

### Learning Courses (16 hours)

HDF 200 - Constructivism as a Tool for Learning 2(2-0)  
HDF 301 - Infant Toddler Practicum Experience 1-3(Spec)  
HDF 402 - Guidance for Young Children 3(Spec)  
HDF 403 - Best Practices in Early Childhood Settings 3(3-0)  
HDF 508 - Early Childhood Program Administration and Leadership 3(3-0)  
SPE 585 - Early Childhood Special Education 3(3-0)

### Trends & International Applications Courses (3 hours)

Select one of the following in consultation with advisor:

CSD 230 - Introduction to Speech, Language, and Hearing Disabilities/Differences 3(3-0)  
EDU 335 - Early Literacy 3(3-0)  
HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)  
HDF 205 - Teaching and Learning about Race in Early Childhood 3(3-0)  
HDF 213/WGS 213 - Introduction to Human Sexuality 3(3-0)  
HDF 214QR - Consumer Economics 3(3-0)  
HDF 247 - Introduction to Gerontology 3(3-0)  
HDF 308 - Theories of Child and Adolescent Development 3(3-0)  
HDF 320 - HDFS International Service Learning 3-6(Spec)  
HDF 321 - International Reggio-Inspired Early Childhood Learning 3(Spec)  
HDF 360 - Integration of Content in Early Childhood through Play 4(Spec)  
HDF 397 - Special Topics in Human Development and Family Studies 1-6(Spec)  
HDF 490 - Independent Study in Human Development and Family Studies 1-6(Spec)  
HDF 497 - Special Topics in Human Development and Family Studies 1-15(Spec)  
HDF 505 - Early Childhood Mental Health 3(3-0)  
HDF 510 - Child Development Seminar: Promoting Resilience 3(3-0)  
HDF 597 - Special Topics in Human Development and Family Studies 1-15(Spec)  
NDS 378 - Maternal and Infant Nutrition 3(3-0)  
TEL 301 - Teaching Multilingual Learners: Grades PK-6 3(3-0)

### Capstone (6 hours)

HDF 409 - Lead Teaching Methods in Early Childhood (Science and Social Studies) 6(Spec)

**Total: 41 semester hours**

## Family Studies Major

B.A.; B.A.A.; B.S. degrees

Some of the most important things we do in life happen at home. Raising children. Relating to a spouse. Coping with financial pressures. Dealing with substance abuse. In CMU's family studies program, you'll build the skills to help families confront these challenges and many others. The program prepares students for careers working in human service settings to help individuals and families build life skills using prevention and intervention-based educational programs (e.g., child and family services, crises intervention, adoption, and foster care). With appropriate graduate education, potential career options include: marriage and family therapy, counseling, social work, family law, family research and/or college instruction

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Student must have a minimum program GPA of 2.5 in order to graduate with this major.
2. Student must receive a grade of C+ or better in HDF 219, HDF 319, and HDF 419 in order to graduate with this major.
3. Students who take the Family Studies major cannot minor in Family Studies or double major in Child Development.
4. Students may only double count 9 credits when combining the Family Studies Major with the Child Development Minor.

### Core Courses (9 hours)

*Core HDFS*

HDF 100 - Lifespan Development 3(3-0)  
HDF 211 - Marriage and Close Relationships 3(3-0)  
HDF 307 - Parent-Child Relations 3(3-0)

### Required Courses I (9 hours)

*Family Studies Content*

HDF 213/WGS 213 - Introduction to Human Sexuality 3(3-0)  
HDF 411 - Families in Social, Legal, & Political Contexts 3(3-0)  
HDF 418 - Family Development in Late Life 3(3-0)

### Required Courses II (3 hours)

*Family Studies Content*

HDF 214QR - Consumer Economics 3(3-0)

### Required Courses III (12 hours)

*Professional Skills and Methods*

HDF 207 - Introduction to Research Methods in HDFS 3(3-0)  
HDF 219 - Applied HDFS: Introduction to the Field 3(Spec)  
HDF 319 - Applied HDFS: Developing Programs for Children and Families 3(3-0)  
HDF 419 - Applied HDFS: Internship 1-12(Spec)

### Electives (6 hours)

Select additional hours from the following list:

HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)  
HDF 212 - Families in Cultural Perspective 3(3-0)  
HDF 247 - Introduction to Gerontology 3(3-0)  
HDF 302 - Infant and Toddler Development 3(Spec)  
HDF 306 - Adolescent Development 3(3-0)  
HDF 320 - HDFS International Service Learning 3-6(Spec)  
HDF 413 - Facilitating Discussion in Human Sexuality Groups 3(3-0)  
HDF 414 - Human Development and Family Studies Applied Quantitative Research 3(3-0)  
HDF 511 - Seminar in Human Sexuality 3(3-0)  
HDF 513 - Readings in the Family 3(3-0)  
HDF 517 - Readings in Marital Counseling and Divorce 3(3-0)  
HSC 519 - Death Education and Suicide Prevention 3(3-0)  
HSC 523 - AIDS Education 1(1-0)  
HSC 524 - Workshop on Health Fitness 2(Spec)  
HSC 525 - Sexually Transmitted Disease Workshop 1(Spec)  
HSC 526 - Behavioral Health 3(3-0)  
HSC 527 - Sex Education Workshop 1(Spec)  
HSC 528 - Smoking and Health Education Workshop 1(Spec)  
HSC 529 - Alcohol Education Workshop 1(1-0)  
HSC 530 - Drug Abuse Workshop 1(Spec)  
REL 334 - Death and Dying 3(3-0)  
SWK 100 - Introduction to Social Work 3(3-0)

**Note:** You may select only one of HSC 519 OR REL 334.

**Total: 39 Semester hours**

## Family Studies Minor

B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

This minor is designed to complement a variety of majors, particularly those that prepare students to work in health and human service settings. Some settings may include event management, recreation, medical settings, family law, counseling, and mental health. Due to the variability in students' goals for completing the minor, all students are encouraged to see an advisor prior to beginning the course work. Advisors for this minor are located in the Department of Human Development and Family Studies.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Student must have a minimum GPA of 2.0 to declare a minor.
2. Students must have a minimum program GPA of 2.5 in order to graduate with this minor.
3. Students who take this minor cannot major in Family Studies.
4. Students may only double count 9 credits when combining the Family Studies Minor with the Child Development Major or Minor or the Child Development Minor.

### Core Courses (9 hours)

*Core HDFS*

HDF 100 - Lifespan Development 3(3-0)  
HDF 211 - Marriage and Close Relationships 3(3-0)  
HDF 307 - Parent-Child Relations 3(3-0)

### Required Courses I (3 hours)

*Family Studies Content*

HDF 213/WGS 213 - Introduction to Human Sexuality 3(3-0)

### Required Courses II (3 hours)

*Family Studies Content*

HDF 214QR - Consumer Economics 3(3-0)

### Electives (9 hours)

Select 9 hours, 6 of which must be HDF designator courses:

HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)  
HDF 212 - Families in Cultural Perspective 3(3-0)  
HDF 247 - Introduction to Gerontology 3(3-0)  
HDF 248 - Service Learning in Gerontology 3(Spec)  
HDF 306 - Adolescent Development 3(3-0)  
HDF 320 - HDFS International Service Learning 3-6(Spec)  
HDF 328 - Programs, Policies and Services for Older Adults 3(3-0)  
HDF 340 - Men and Masculinities in Adulthood 3(3-0)  
HDF 411 - Families in Social, Legal, & Political Contexts 3(3-0)  
HDF 413 - Facilitating Discussion in Human Sexuality Groups 3(3-0)  
HDF 418 - Family Development in Late Life 3(3-0)  
HDF 430/WGS 430 - Women and Aging 3(3-0)  
HDF 506 - Practicum in Parent Involvement 3(2-2)  
HDF 511 - Seminar in Human Sexuality 3(3-0)  
HDF 513 - Readings in the Family 3(3-0)  
HDF 516 - Family Development: Early Adulthood/Middle Age 3(3-0)  
HDF 517 - Readings in Marital Counseling and Divorce 3(3-0)  
HDF 535 - Dementia Care: Diagnosis, Treatment and Prevention 3(3-0)  
HSC 523 - AIDS Education 1(1-0)  
HSC 524 - Workshop on Health Fitness 2(Spec)  
HSC 525 - Sexually Transmitted Disease Workshop 1(Spec)  
HSC 526 - Behavioral Health 3(3-0)  
HSC 527 - Sex Education Workshop 1(Spec)  
HSC 528 - Smoking and Health Education Workshop 1(Spec)  
HSC 529 - Alcohol Education Workshop 1(1-0)  
HSC 530 - Drug Abuse Workshop 1(Spec)  
PES 143 - Sexual Assault and Harassment/Awareness and Avoidance 2(2-0)  
PSY 350 - Clinical Interviewing and Counseling 3(3-0)

**Note:** Students are strongly advised to select elective courses in consultation with an advisor.

**Total: 24 semester hours**

## Teaching Early Childhood B-K & Early Childhood Special Education Major

*B.S. in Ed. degree, ECE*

The purpose of the Teaching Early Childhood, Birth-Kindergarten and Early Childhood Special Education major is to prepare educators to address the needs of the whole-child; use relevant, research-based criteria to establish a supportive, engaging environment that fosters child development and learning through the use of practices and play that meets the needs of all young learners.

This Learner-Centered major meets the training guidelines of the National Association for the Education of Young Children (NAEYC), and prepares the educator in areas of Literacy, Mathematics, Science, and Social Studies to teach young learners from birth through Kindergarten in a variety of settings which include home visiting, child-care, state and federally funded preschool programs, kindergarten classrooms and early childhood special education.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minimum 2.8 GPA must be earned in the Teaching Grades B-K Major.
2. Student must receive a grade of C+ or better in HDF 302, HDF 303, HDF 402, HDF 403, HDF 409, and SPE 585 in order to graduate with this major.
3. HDF 409 and SPE 585 are departmental methods courses and must be completed with a grade of C+ or better before student teaching.
4. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
5. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.

### Required Courses I - Development & Family (19 hours)

HDF 205 - Teaching and Learning about Race in Early Childhood 3(3-0)  
 HDF 302 - Infant and Toddler Development 3(Spec)  
 HDF 303 - Early Childhood Development 4(Spec)  
 HDF 309 - Family and Community Partnerships in Early Childhood 3(3-0)  
 HDF 401QR - Quantitative Methods in Childhood Assessment 3(3-0)  
 HDF 505 - Early Childhood Mental Health 3(3-0)

### Required Courses II - Learning (29 hours)

EDU 335 - Early Literacy 3(3-0)  
 HDF 200 - Constructivism as a Tool for Learning 2(2-0)  
 HDF 301 - Infant Toddler Practicum Experience 1-3(Spec)  
 HDF 360 - Integration of Content in Early Childhood through Play 4(Spec)  
 HDF 402 - Guidance for Young Children 3(Spec)  
 HDF 403 - Best Practices in Early Childhood Settings 3(3-0)  
 HDF 409 - Lead Teaching Methods in Early Childhood (Science and Social Studies) 6(Spec)  
 HDF 508 - Early Childhood Program Administration and Leadership 3(3-0)  
 SPE 585 - Early Childhood Special Education 3(3-0)

**Total: 48 semester hours**

## Teaching Early Childhood, B-3rd and Early Childhood Special Education Major

*B.S. in Ed. degree, ECE*

A minimum of a 2.8 GPA must be earned in all teaching majors.

The purpose of the Teaching Early Childhood, Birth-Grade 3 and Early Childhood Special Education major is to prepare educators to address the needs of the whole-child; use relevant, research-based criteria to establish a supportive, engaging environment that fosters child development and learning through the use of practices and play that meets the needs of all young learners. This Learner-Centered major prepares the educator in areas of Literacy, Mathematics, Science, and

Social Studies to teach young learners from birth through grade 3 in a variety of settings which include home visiting, child-care, state and federally funded preschool programs, early elementary classrooms and early childhood special education.

The Teaching Early Childhood, Birth-Grade 3 and Early Childhood Special Education major is housed in the Department of Human Development and Family Studies. The major combines courses in the departments of Human Development and Family Studies, Teacher and Special Education, English Language and Literature, Mathematics, Social Studies, and the College of Science and Engineering.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of a 2.8 must be earned in the Teaching Grades B-3 Major.
2. Complete EDU 107 with a B or higher.
3. HDF 409 and SPE 585 are departmental methods courses and must be completed with a grade of C+ or better before student teaching.
4. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
5. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.

Classes that require a C+ or higher on the major: EDU 330, EDU 342, EDU 380, HDF 302, HDF 303, HDF 402, HDF 403, HDF 409.

Note: 12 credit hours double count on the University Program.

### Required Courses

BIO 165 - Life Science for Elementary Teachers 3(2-3)  
 EDU 330 - Foundations of Reading Instruction 3(3-0)  
 EDU 335 - Early Literacy 3(3-0)  
 EDU 342 - Word Study and Fluency: PK-3 3(3-0)  
 EDU 380WI - Interdisciplinary Methods and Pre-Student Teaching (Math & Literacy, PK- 6-10(Spec)  
 ENG 381WI - Children's Literature 3(3-0)  
 GEL 285/GEO 285 - Earth Systems Science for Elementary Teachers 3(2-2)  
 HDF 200 - Constructivism as a Tool for Learning 2(2-0)  
 HDF 205 - Teaching and Learning about Race in Early Childhood 3(3-0)  
 HDF 301 - Infant Toddler Practicum Experience 1-3(Spec)  
 HDF 302 - Infant and Toddler Development 3(Spec)  
 HDF 303 - Early Childhood Development 4(Spec)  
 HDF 309 - Family and Community Partnerships in Early Childhood 3(3-0)  
 HDF 360 - Integration of Content in Early Childhood through Play 4(Spec)  
 HDF 400 - Developmental Assessment of Children 3(3-0)  
 HDF 402 - Guidance for Young Children 3(Spec)  
 HDF 403 - Best Practices in Early Childhood Settings 3(3-0)  
 HDF 409 - Lead Teaching Methods in Early Childhood (Science and Social Studies) 6(Spec)  
 HDF 505 - Early Childhood Mental Health 3(3-0)  
 HDF 508 - Early Childhood Program Administration and Leadership 3(3-0)  
 HST 210WI - United States History through Michigan Eyes 3(3-0)  
 MTH 150 - The Teaching of Counting and Whole Numbers 3(3-0)  
 MTH 250 - The Teaching of Fractions, Decimals, and Proportional Reasoning 3(3-0)  
 MTH 350 - The Teaching of Patterns, Shapes, Measurement and Data 3(3-0)  
 PHS 151QR - Introductory Physical Science I 3(2-2)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)  
 SCI 385 - Science and Engineering Practices for Teaching PK-6 2(1-2)  
 SPE 585 - Early Childhood Special Education 3(3-0)

**Total: 86 semester hours**

## Early Childhood Development and Learning Minor

Early Childhood Development and Learning is a field of study that examines the growth and development of children birth through age eight, within the context of teaching and working with children in educational and social settings. The courses on this minor meet the course work requirements for early childhood education and preschool teaching by the Michigan Department of Education and the training guidelines of the National Association for the Education of Young Children (NAEYC), providing students with education, training, and skills to work with children and families from diverse backgrounds. This minor is especially appropriate for students who plan on working in inclusive early childhood settings such as PK-3 elementary classrooms, child care centers, preschools, Head Start, Early Head Start programs, and early childhood special education programs.

Students who complete this minor may take the Michigan Early Childhood Examination. Successful completion of this examination results in the addition of the Early Childhood (ZS) Endorsement to the student's teaching certificate.

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Student must have completed or currently be enrolled in HDF 100 or EDU 280 or PSY 220 as a pre-requisite and must have a minimum overall GPA of 2.5 in order to declare a minor.
  2. Student must have a minimum program GPA of 2.7 in order to graduate with all teaching minors.
  3. Student must receive a grade of C+ or better in HDF 302, 303, and 402 in order to graduate with this minor.
  4. HDF 402 is a departmental methods course and must be completed with a grade of C+ or better before student teaching.
  5. In order to meet Michigan Department of Education Standards for the ZS Endorsement Capstone Experience, student teaching assignments must take place in at least two of the three areas (infant/toddler, preschool, and K-3) under the direction of a qualified cooperating teacher.
- 

### Prerequisite Course (3 hours)

Select one of the following:

EDU 280 - Education of Children 3(3-0)

HDF 100 - Lifespan Development 3(3-0)

PSY 220 - Developmental Psychology 3(3-0)

**Note:** These courses may be double counted on the degree.

### Development & Family Courses (15 hours)

HDF 301 - Infant Toddler Practicum Experience 1-3(Spec)

HDF 302 - Infant and Toddler Development 3(Spec)

HDF 303 - Early Childhood Development 4(Spec)

HDF 309 - Family and Community Partnerships in Early Childhood 3(3-0)

HDF 400 - Developmental Assessment of Children 3(3-0)

### Learning Courses I (8 hours)

HDF 200 - Constructivism as a Tool for Learning 2(2-0)

HDF 402 - Guidance for Young Children 3(Spec)

SPE 585 - Early Childhood Special Education 3(3-0)

### Learning Courses II (3 hours)

Select one of the following:

EDU 525 - Early Childhood Education 3(3-0)

HDF 403 - Best Practices in Early Childhood Settings 3(3-0)

**Total: 29 semester hours**



## Recreation, Parks, and Leisure Services Administration (RPL)

For information, please contact the department office, 989-774-3858, 214 Finch;  
[www.rpl.cmich.edu](http://www.rpl.cmich.edu)

### Why Study Recreation, Parks, and Leisure Services Administration?

Americans spend approximately one-third of their lives enjoying some type of leisure experience. With increasing life spans, shorter work weeks and longer and more intensive vacations, the amount of time spent in leisure continues to increase.

The dollars spent on leisure make a substantial contribution to the economy. It is predicted that in the years to come, recreation/travel/tourism may comprise the largest expenditure of our economy, larger than either defense or health care. Professionals in recreation, parks, and leisure service administration are trained to help others utilize leisure time intelligently. As recreation and park administration personnel, they contribute immeasurably to an improved quality of life for others through creative and well-planned use of leisure time.

### Recreation, Parks, and Leisure Services Administration at CMU

Accredited by the Council on Accreditation of Parks, Recreation, Tourism, and Related Professions, CMU offers the only professionally accredited major in the field of recreation, parks, and leisure services administration in the state of Michigan. Students may select one of three majors offered by the Department; these include Event and Recreation Management, Outdoor and Environmental Recreation, and Recreational Therapy and Rehabilitation. The Event and Recreation Management major would prepare students for recreation, programming, and event management across a spectrum of public, nonprofit, and commercial settings and environments. Students with an Outdoor and Environmental Recreation major would be prepared for employment in camp administration, nature interpretation, and county, state, and/or national parks. The Recreational Therapy and Rehabilitation major prepares students to work with persons with illness or disability utilizing recreation activity as a therapeutic or treatment intervention. Students obtaining degrees in Recreational Therapy and Rehabilitation may be employed within hospitals (rehabilitation, psychiatric, substance abuse), residential facilities, geriatric agencies and/or community recreation and parks departments.

Regardless of the major selected, students majoring in recreation will be required to enroll in a common core of courses that will emphasize the philosophical framework of the profession. Students will acquire professional competencies to effectively *design, organize, implement, manage, administer, and/or evaluate* recreational programming assuring it effectively meets the diverse needs of the individuals or community serviced. The department places a strong emphasis on the practical aspects of students' training by offering an extensive internship program, which is completed following the completion of professional coursework. The combination of the professional internship and our curriculum provides the student with the competencies necessary to direct and/or administer leisure services supporting individual, family, and community wellness assuring an enhanced quality of life for all.

### The Faculty

Jill Almasi-Dole, Jordan Bruursema, Shay Dawson, Robert Dvorak, Megan Hofer, Lori Irwin, Beth Kennedy, Kyung Hee Lee, Timothy Otteman (Chair), Robert Schumacker, LeAnn Wheeler

## Majors

### Event and Recreation Management Major

*B.A.A. degree*

*Advisors: Tim Otteman (students with last names A-L) and Lori Irwin (students with last names M-Z)*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students must achieve a C or better in all courses required for program admission and all required courses to graduate with this major.

An internship and a minor are required on this major. Specific minors are preferred. Other minors may be considered only through consultation and approval from the department advisor.

#### Preferred Minors:

Advertising, American Sign Language, Business Administration, Child Development, Communications, Entrepreneurship, Gerontology, Hospitality Services Administration, Management, Marketing, Professional Sales, Public Administration, Religion, Retailing, Sport Management, Youth Studies, or any Language minor.

The Event Management minor cannot be taken as a minor with this concentration.

#### Required Professional Core Courses (66 hours)

RPL 118 - Introduction to Recreation, Parks, and Leisure Services 2(2-0)  
RPL 206 - Recreation Activity Facilitation 3(3-0)  
RPL 209 - Inclusive Recreation with Diverse Populations 2(2-0)  
RPL 222 - Introduction to Recreation and Event Management 3(3-0)  
RPL 307 - Management Skills in Leisure Services 3(3-0)  
RPL 310 - Pre-Internship in Leisure Services 1(1-0)  
RPL 320 - Professional Internship in Recreation 1-30(Spec)  
RPL 343/HSA 343 - Tourism 3(3-0)  
RPL 430 - Planning Recreation Programs and Events 3(3-0)  
RPL 436 - Facility Operations and Maintenance 3(3-0)  
RPL 438 - Meeting and Exposition Planning 3(3-0)  
RPL 470 - Park and Natural Resource Management 3(3-0)  
RPL 497 - Seminar in Recreation Professional Development 1(1-0)  
RPL 508QR - Budgeting & Funding for Leisure Service Agencies 3(3-0)  
RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)  
RPL 518 - Research & Philosophy in RPL 3(3-0)  
RPL 545 - Marketing of Leisure Services 3(3-0)

**Note:** RPL 430 and 545 are approved for offering as WL.

**Note:** Choose one of RPL 343 OR 436, not both.

**Note:** Choose one of RPL 307 OR 470, not both.

**Note:** RPL 310 must be taken two semesters prior to internship; RPL 497 and 518 must be taken one semester prior to internship; RPL 320 must be taken as a 30 credit hour internship.

**Total: 66 semester hours**

## Outdoor and Environmental Recreation Major

B.A.; B.S.; B.A.A. degrees

Advisor: Bob Dvorak

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students must achieve a C or better in all courses required for program admission and all required courses to graduate with this major.

An internship and a minor are required on this concentration. A minor or equivalent in Anthropology, Biology, Geography, Geology, Museum Studies, or Sustainability and Environmental Policy is preferred; other appropriate minors may be considered only through consultation and approval from a departmental advisor.

### Required Professional Core Courses (45-60 hours)

RPL 118 - Introduction to Recreation, Parks, and Leisure Services 2(2-0)  
 RPL 205 - Outdoor Leadership 3(2-2)  
 RPL 209 - Inclusive Recreation with Diverse Populations 2(2-0)  
 RPL 216 - Introduction to Outdoor Recreation 3(3-0)  
 RPL 218 - Teaching of Outdoor Skills 3(3-0)  
 RPL 310 - Pre-Internship in Leisure Services 1(1-0)  
 RPL 320 - Professional Internship in Recreation 1-30(Spec)  
 RPL 358 - Foundations of Outdoor and Environmental Education 3(3-0)  
 RPL 370 - Leave No Trace Ethics 1(1-0)  
 RPL 470 - Park and Natural Resource Management 3(3-0)  
 RPL 508QR - Budgeting & Funding for Leisure Service Agencies 3(3-0)  
 RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)  
 RPL 518 - Research & Philosophy in RPL 3(3-0)

**Note:** RPL 310 must be taken two semesters prior to actual internship; RPL 518 must be taken one semester prior to internship.

**Note:** RPL 320 (Internship) is a capstone experience following the completion of all other course work at the university. Students electing the B.A. or B.S. degree plans will complete a 15 credit internship. Students electing the B.A.A. degree plan will complete a 30 credit internship.

### Additional Requirements (6 hours)

Through consultation with an advisor, the student will select from the following classes for a total of six (6) credits:

RPL 365 - Wilderness First Responder 3(3-0)  
 RPL 552 - Environmental Interpretation 3(3-0)  
 RPL 570 - Wilderness Issues and Policy 3(3-0)

**Total: 51-66 semester hours**

## Recreational Therapy and Rehabilitation Major

B.A.; B.A.A.; B.S. degrees

Advisors: LeAnn Wheeler (students with last names A-M) and Shay Dawson (students with last names N-Z)

The goal of the Recreational Therapy and Rehabilitation Major is to prepare students to serve as competent practitioners in the role of Certified Therapeutic Recreation Specialists (CTRS). Students in this program develop skills to work with individuals with disabilities and chronic illnesses in diverse health care settings. In addition to structured coursework a strong emphasis is placed on practical training via numerous volunteer placements and a full-time clinical internship under a CTRS. Upon completion of all coursework and professional internship, the student is eligible to sit for the national certifying examination administered by the National Council for Therapeutic Recreation Certification (NCTRC). Academic advisors work closely with students in the selection and scheduling of courses to assure timely completion of degree and major requirements. Academic advisors also provide recreational therapy and rehabilitation advisement for pre-graduate programs in selected allied areas (i.e. Occupational Therapy).

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students must achieve a C or better in all courses required for program admission and all required courses to graduate with this major.

### Required Courses I (41 hours)

HSC 214 - Human Anatomy 4(3-3)  
 HSC 215 - Human Physiology 4(3-2)  
 PSY 250 - Abnormal Psychology 3(3-0)  
 RPL 118 - Introduction to Recreation, Parks, and Leisure Services 2(2-0)  
 RPL 210 - Introduction to Recreational Therapy 3(3-0)  
 RPL 310 - Pre-Internship in Leisure Services 1(1-0)  
 RPL 340 - Therapeutic Recreation: Developmental Disabilities 3(3-0)  
 RPL 341 - Therapeutic Recreation: Physical Disabilities 3(3-0)  
 RPL 342 - Therapeutic Recreation: Behavioral Health 3(3-0)  
 RPL 345 - Therapeutic Recreation: Gerontology 3(3-0)  
 RPL 349 - Facilitation Techniques in Therapeutic Recreation 3(3-0)  
 RPL 518 - Research & Philosophy in RPL 3(3-0)  
 RPL 580WI - Programming for Therapeutic Recreation 3(3-0)  
 RPL 581 - Therapeutic Recreation: Management Issues 3(3-0)

**Note:** RPL 310 must be taken two semesters prior to internship; RPL 518 must be taken one semester prior to internship.

### Required Courses II (3 hours)

Select one of the following:

HDF 100 - Lifespan Development 3(3-0)  
 PSY 220 - Developmental Psychology 3(3-0)

### Required Courses III (15-30 hours)

RPL 320 - Professional Internship in Recreation 1-30(Spec)

**Note:** RPL 320 - Students seeking a B.S. or B.A. degree will complete a one semester 15 credit hour internship in a clinical setting. Students seeking a B.A.A. degree will complete a 30-hour internship (in two unique settings, one of which must be clinical).

### Electives (1 hour)

Select from the following:

RPL 300 - Adventure Therapy 1(Spec)  
 RPL 348 - Aquatic Therapy Seminar 1(1-0)

**Total: 60-75 semester hours**

## Minors

### Disability Studies and Community Inclusion Minor

This is an interdepartmental minor. Please check the index for the page number.

### Event Management Minor

*B.A., B.A.A., B.S., B.S. in B.A. degrees*

*Advisors: Kyung Hee Lee (students with last names A-L) and Jill Almasi-Dole (students with last names M-Z)*

The program provides students with the combination of skills and knowledge needed to be successful as an event manager in a range of event planning settings. Event managers are found in education, government, private business and industry, and the non-profit sectors. Skills and knowledge derived from this minor will enhance a student's marketability and employability in numerous settings. The program consists of a core of 17 semester hours including coursework in recreation programming, special event administration, meeting and exposition planning, along with an introduction to lodging operations and foods. All minors complete a 2 credit hour field experience in which they work with an organization or agency to plan and implement an event. Students also select 6 semester hours of elective coursework from a list of approved electives.

#### Core Courses (17 hours)

**Note:** All minors must complete RPL 318 for a 2-credit-hour field experience.

HSA 350 - Lodging Operations 3(3-0)  
NDS 261 - Foodservice Catering for Events 3(3-0)  
RPL 222 - Introduction to Recreation and Event Management 3(3-0)  
RPL 318 - Field Course in Recreation Specialization 1-15(Spec)  
RPL 430 - Planning Recreation Programs and Events 3(3-0)  
RPL 438 - Meeting and Exposition Planning 3(3-0)

**Note:** RPL 222 is prerequisite to RPL 430 and should be taken the first semester of the minor.

#### Electives (6 hours)

Select from the following:

ART 231 - Introduction to Graphic Design 3(0-6)  
FMD 357 - Fashion Show Production & Promotion 3-6(Spec)  
HSA 445 - Advanced Food and Beverage Systems Management 3(3-0)  
IND 331 - The Art of Event Planning 3(3-0)  
JRN 350 - Public Relations Principles and Practices 3(3-0)  
RPL 206 - Recreation Activity Facilitation 3(3-0)  
RPL 343/HSA 343 - Tourism 3(3-0)  
RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)

**Total: 23 credit hours**

### Leadership Minor

This is an interdisciplinary minor. Please check the index for the page number.

### Outdoor and Environmental Education Minor

*B.A.; B.A.A.; B.S. degrees*

*Advisor: Bob Dvorak*

#### Required Courses (15 hours)

RPL 216 - Introduction to Outdoor Recreation 3(3-0)  
RPL 218 - Teaching of Outdoor Skills 3(3-0)  
RPL 318 - Field Course in Recreation Specialization 1-15(Spec)  
RPL 358 - Foundations of Outdoor and Environmental Education 3(3-0)  
RPL 552 - Environmental Interpretation 3(3-0)

#### Electives (6 hours)

Select any RPL course.

#### Total: 21 semester hours

Credit/No credit courses may be applied up to a total of 10 semester hours on a major or minor. All Credit/No Credit classes must be 100 or 200 level except those offered on a Credit/No Credit only basis at the 300, 400, or 500 level.

### Recreation Minor

*B.A.; B.A.A.; B.S. degrees*

*Advisor: Jordan Bruursema*

#### Required Courses I (5 hours)

RPL 118 - Introduction to Recreation, Parks, and Leisure Services 2(2-0)  
RPL 206 - Recreation Activity Facilitation 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

RPL 210 - Introduction to Therapeutic Recreation 3(3-0)  
RPL 216 - Introduction to Outdoor Recreation 3(3-0)  
RPL 222 - Introduction to Recreation and Event Management 3(3-0)

#### Required Courses III (3 hours)

Three credit hours of field coursework from the following:

RPL 318 - Field Course in Recreation Specialization 1-15(Spec)

#### Electives (10 hours)

Select any RPL course.

#### Total: 21 semester hours

**Note:** Credit/No credit courses may be applied up to a total of 10 semester hours on a major or minor. All Credit/No Credit classes must be 100 or 200 level except those offered on a Credit/No Credit only basis at the 300, 400, or 500 level.

### Undergraduate Certificate - Deafblind Intervener

The Deafblind Intervener Certificate Program is designed for degree-seeking students of any major and non-degree-seeking students interested in a career working with students who are deafblind, ages birth through twenty-one years. Students will take coursework that will prepare them to implement best practices in working with students who are deafblind and lead to a national intervener credential. It is recommended that students have a volunteer placement or employment at a school where they are assigned to work with a student who is deafblind. Assistance in finding a placement will be available through the Intervener Certificate Program Director.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

In order to be admitted into the program, candidates must have a high school diploma or the equivalent.

Double counting of courses will not be allowed.

#### Required Courses (12 hours)

DBI 101 - Introduction to Deafblindness and Intervention 3(3-1)  
DBI 201 - Building Communication and Language Skills 3(3-1)  
DBI 301 - Intervention Strategies and Teaming 3(3-1)  
DBI 302 - Intervention Practicum 3(Spec)

**Total: 12 semester hours**

## Teacher and Special Education (ECE, EDU, MLE, SPE)

For information, please contact the chairperson, 989-774-3975, EHS 421;

<https://www.cmich.edu/academics/colleges/college-education-human-services/departments/teacher-education-professional-development>

### The Study of Education at CMU

Central Michigan University's teacher education program seeks to provide the preparation required to establish a professional practice that is knowledge-driven, learner-centered, and relevant to the multiple contexts in which the modern educator must function: the classroom, the multi-disciplinary school-based team, and the broader community. The Department of Teacher and Special Education contributes to this mission through courses and programs with the following specific objectives:

1. To provide the professional education coursework needed by students preparing to teach in the K-12 general and special education classrooms in Michigan.
2. To advise undergraduate and graduate students in the selection of programs and courses.
3. To provide coursework for graduate students seeking a master's degree.
4. To direct graduate students in independent studies, readings, field studies, and theses.

The departmental programs are composed of early childhood, elementary, secondary education, and special education. The department also offers coursework in interdisciplinary/interdepartmental majors and minors.

### Why Study Special Education?

The study of special education will help you to develop a knowledge and understanding of individual differences, life span issues and working with others. The programs offered emphasize working with students as individuals within a group setting and serving them throughout the life span. All programs provide experiential applications for students. If you are interested in a career in working with persons with special needs or in improving your skills in these areas, you should discuss your plans with a member of the special education faculty.

### Special Education at CMU

The department offers undergraduate special education majors on the Bachelor of Science degree, grades K-12. A program is also offered for teachers holding general elementary or secondary certification to become approved in the area of emotional impairment or cognitive impairment.

The department also offers programs leading to a Master of Arts in Special Education: The Master Teacher degree, which prepares graduates for additional teaching endorsements in the areas of emotional impairment, learning disabilities, autism, and cognitive impairment at the K-12 level.

See the Graduate Bulletin for a complete description of graduate programs.

### The Faculty

Brandis Ansley, Lorraine Berak, Adam Berman, Meghan Block, Lori Boyle, Timothy A. Brannan, April Burke, Shane Cavanaugh, Natalia Collings, Kevin Cunningham, Dawn Decker, Michael Deschryver, Kathryn Dirkin, Raymond Francis, JoDell Heroux, Troy Hicks (chair), Tamara Jetton, William Leibfritz, James McDonald, Mark Moody, Krystyna Nowak-Fabrykowski, Scott Roberts, Kristina Rouech, Suzanne Shellady, Chad Waldron, Heidi Waugh, Jennifer Weible, Mingyuan Zhang

## Departmental Programs

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

#### Advising

Students interested in teaching in the elementary and secondary grades may contact the EHS Office of Educator Preparation Programs (EHS 421) for pre-admission advising. This service assists students in determining the appropriateness of their career plans and provides information about admission to the teacher education program. The Teacher Education Student Handbook, which answers many student questions about the program, may be found on the EHS Office of Educator Preparation Programs website at <https://www.cmich.edu/academics/colleges/college-education-human-services/centers/center-educator-preparation-development>

#### Application

The three cycles of candidacy may be found in the Standards Leading to Teacher Certification. Students must apply for admission into the Teacher Education Program before becoming eligible to enroll in professional education courses. After being admitted into teacher education, a student has five years in which to complete requirements for graduation; otherwise he or she must reapply for the program.

The application for teacher education is available on the EHS Office of Educator Preparation Programs website (<https://www.cmich.edu/colleges/ehs/unit/css>).

#### Student Teaching

The Department of Teacher and Special Education offers the field-based professional education courses required for the State of Michigan's Elementary and Secondary Standard Teaching Certificates. Student teachers are placed in one of the CMU Student Teaching Centers within the state. There are also opportunities to student teach in an international placement during a portion of the student teaching field experience.

For additional information, contact the Director of Student Teaching at 989-774-4411. Student teaching information is also available on the TEPD website at <https://www.cmich.edu/colleges/ehs/program/TE>.

**Application.** The application process begins with a Student Teaching Application Meeting during the first week of the semester prior to the student teaching semester. The application is completed online. Once approved to student teach, students are assigned to a student teaching center. An interview takes place with a University Coordinator from the center who will secure the field placement. Students may NOT secure their own placement.

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**Requirements.** Students must complete the requirements as posted in the Teacher Education Handbook, before student teaching placements are secured. These include departmental approval for each major and minor, a 2.7 or higher GPA in each major and minor, an overall GPA of 2.70 or higher, and a C+ or higher in all methods and professional education classes. "Incompletes" are NOT acceptable in any methods or professional education course. Students register themselves for EDU 432 and 458 during open registration. Students pursuing special education endorsements should contact the Teacher and Special Education Department for information regarding special education student teaching.

**Elementary:** EDU 107; EDU 432 or SPE 500; EDU 458 or SPE 557; HDF 100; SPE 250; TEL 301 and all major and minor requirements listed in the bulletin.

**Elementary students** must complete the general elementary education MTTC examination and complete extra examinations in their major and minor for endorsements in those areas.

**Secondary:** EDU 107, EDU 290 (except for music majors), EDU 210, EDU 325 (except for music majors), EDU 432, EDU 450, EDU 458, EDU 495; SPE 504; and all major and minor requirements listed in the bulletin (additional requirements for Special Education Majors).

**Secondary students** must successfully complete the Michigan Test of Teacher Certification (MTTC) in their major and minor areas.

### Teacher Certification

Students must fulfill all requirements listed for Admission to Teacher Education Programs as specified in the *Standards Leading to Teacher Certification* section of this Bulletin. Students interested in certification regulations should contact the EHS Office of Educator Preparation Programs immediately. As of April, 1987 "General Elementary Certification Endorsement" means an authorization to teach in grades kindergarten to and including grade five in all subjects and in major and minor areas of preparation in grades six through eight and K-8, if in a self-contained classroom. The Michigan Secondary Standard Teacher's Certificate qualifies the graduates to teach in their major and minor fields in grades six through twelve.

### Secondary Education

*B.S. in Ed. degree leading to Standard Secondary Certificate*

The Secondary Education Undergraduate Program offers professional education courses applicable to State of Michigan requirements for the Secondary Standard Certificate. You will need to follow the requirements of the Bachelor of Science in Education degree with standard secondary certificate.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

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See the information at the beginning of this section.

Professional education requirements for students who intend to teach in grades six to twelve are detailed in the Bachelor of Science in Education (B.S. in Ed) degree.

You should seek advising help from the EHS Office of Educator Preparation Programs. Admission requirements are detailed in the Teacher Education Student Handbook at <https://www.cmich.edu/academics/colleges/college-education-human-services/centers/center-educator-preparation-development>.

### Elementary Education

*B.S. in Ed. degree leading to Standard Certificate, Early Childhood and Elementary Education*

The Elementary Education Undergraduate Program offers professional education courses applicable to State of Michigan Requirements for the Standard Certificate. You will need to follow the requirements of the Bachelor of Science in Education (Early Childhood and Elementary Education) degree with standard certificate.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

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See the information at the beginning of this section.

Professional education requirements for students who intend to teach in kindergarten through sixth grade are detailed in the Bachelor of Science in Education (B.S. in Ed) degree for Early Childhood and Elementary Education.

You should seek advising help from the EHS Office of Educator Preparation Programs. Admission requirements are detailed in the Teacher Education Student Handbook at <https://www.cmich.edu/academics/colleges/college-education-human-services/centers/center-educator-preparation-development>.

### Majors

#### Teaching Grades 3-6 Major

*B.S. Ed., Standard Certificate (Early Childhood and Elementary Education)*

A minimum of a 2.8 GPA must be earned in all teaching majors.

The purpose of the Teaching Grades 3-6 major is to prepare educators to address the needs of the whole-child; use relevant, research-based criteria to establish a supportive, engaging environment that fosters learning; and use practices that meets the needs of all learners. This Learner-Centered major prepares the educator in areas of Literacy, Mathematics, Science, and Social Studies to teach students in grades PK-3 in a self-contained classroom or departmentalized setting.

Teaching Grades 3-6 major is housed in the Department of Teacher and Special Education and combines courses in the departments of Teacher and Special Education, Sciences, English, Mathematics, Social Studies, Arts, Music, and Physical Education. A minimum 2.8 must be earned in this major.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

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1. A minimum cumulative average of a 2.8 must be earned in the Teaching Grades 3-6 Major.
2. Complete EDU 107 with a B or higher.
3. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
4. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.

Classes that require a C+ or higher on the major: EDU 293, EDU 330, EDU 335, EDU 342, EDU 380, EDU 381, EDU 495, ENG 316, HDF 402, HDF 403, HDF 409.

Students must earn a grade of C or better in MTH 150, MTH 250, and MTH 350.

**Note:** 12 credit hours double count on the University Program.

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#### Required Courses (68 hours)

BIO 165 - Life Science for Elementary Teachers 3(2-3)  
 EDU 293 - Educational Psychology for Elementary Education 3(Spec)  
 EDU 330 - Foundations of Reading Instruction 3(3-0)  
 EDU 380WI - Interdisciplinary Methods and Pre-Student Teaching (Math & Literacy, PK-6) 6-10(Spec)  
 EDU 381WI - Interdisciplinary Methods and Pre-Student Teaching 6(Spec)  
 EDU 495 - Foundations of Education 3(3-0)  
 EDU 515 - Managing Classrooms and Learning Environments 3(Spec)  
 EDU 533 - Diagnosis and Treatment of Reading Difficulties 3(2-3)

ENG 316 - Teaching Writing and Grammar, Grades 3-6 3(3-1)  
 ENG 381WI - Children's Literature 3(3-0)  
 GEL 285/GEO 285 - Earth Systems Science for Elementary Teachers 3(2-2)  
 GEO 350 - United States and Canada 3(3-0)  
 HST 210WI - United States History through Michigan Eyes 3(3-0)  
 MTH 150 - The Teaching of Counting and Whole Numbers 3(3-0)  
 MTH 250 - The Teaching of Fractions, Decimals, and Proportional Reasoning 3(3-0)  
 MTH 350 - The Teaching of Patterns, Shapes, Measurement and Data 3(3-0)  
 PHS 151QR - Introductory Physical Science I 3(2-2)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)  
 SCI 385 - Science and Engineering Practices for Teaching PK-6 2(1-2)  
 SPE 311 - Foundations in Educational Assessment 3(3-0)  
 SPE 504 - Teaching Students in Inclusive Settings 3(3-0)

#### Other Requirements (4 hours)

Select two of the following courses:

ART 345 - Art in the Elementary School 2(1-2)  
 HPE 310 - Physical Education for the Classroom Teacher 2(Spec)  
 HSC 343 - Health Education in the Elementary School 2(2-0)  
 MUS 330 - Music for Elementary Classroom Teachers 2(1-2)

**Total: 72 semester hours**

## Teaching Grades 3-6 with Special Education Major

*B.S. Ed., Standard Certificate (Early Childhood and Elementary Education)*

A minimum of a 2.8 GPA must be earned in all teaching majors.

The purpose of the Teaching Grades 3-6 major paired with a special education major is to prepare educators to address the needs of the whole-child; use relevant, research-based criteria to establish a supportive, engaging environment that fosters, learning; and use practices that meets the needs of all learners including students with disabilities. This Learner-Centered major prepares the educator in areas of Literacy, Mathematics, Science, and Social Studies to teach students in grades PK-3 in a self-contained classroom or departmentalized setting. The Teaching Grades 3-6 major paired with Special Education EI or CI will prepare candidates to be certified in grades 3-6 and special education K-12.

The Teaching Grades 3-6 major is housed in the Department of Teacher and Special Education. The special education Cognitive Impairment and Emotional Impairment majors are housed in the Department of Teacher and Special Education. The Teaching Grades 3-6 major combines courses in the departments of Teacher and Special Education, Sciences, English, Mathematics, and Social Studies. A minimum 2.8 must be earned in this major. For information on the special education majors, refer to the Department of Teacher and Special Education.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of a 2.8 must be earned in the Teaching Grades 3-6 Major
2. Complete EDU 107 with a B or higher.
3. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
4. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.

Classes that require a C+ or higher on the major: EDU 330, EDU 380, EDU 381, ENG 316.

Students must earn a grade of C or better in MTH 150, MTH 250, and MTH 350.

**Note:** 12 credit hours double count on the University Program.

#### Required Courses (56 hours)

BIO 165 - Life Science for Elementary Teachers 3(2-3)  
 EDU 330 - Foundations of Reading Instruction 3(3-0)  
 EDU 380WI - Interdisciplinary Methods and Pre-Student Teaching

(Math & Literacy, PK- 6) 6-10(Spec)

EDU 381WI - Interdisciplinary Methods and Pre-Student Teaching 6(Spec)

EDU 533 - Diagnosis and Treatment of Reading Difficulties 3(2-3)

ENG 316 - Teaching Writing and Grammar, Grades 3-6 3(3-1)

ENG 381WI - Children's Literature 3(3-0)

GEL 285/GEO 285 - Earth Systems Science for Elementary Teachers 3(2-2)

GEO 350 - United States and Canada 3(3-0)

HST 210WI - United States History through Michigan Eyes 3(3-0)

MTH 150 - The Teaching of Counting and Whole Numbers 3(3-0)

MTH 250 - The Teaching of Fractions, Decimals, and Proportional Reasoning 3(3-0)

MTH 350 - The Teaching of Patterns, Shapes, Measurement and Data 3(3-0)

PHS 151QR - Introductory Physical Science I 3(2-2)

PSC 105 - Introduction to American Government and Politics 3(3-0)

SCI 385 - Science and Engineering Practices for Teaching PK-6 2(1-2)

SPE 311 - Foundations in Educational Assessment 3(3-0)

**Total: 56 semester hours**

## Teaching Grades PK-6 Major

*B.S. Ed., Standard Certificate (Early Childhood and Elementary Education)*

A minimum of a 2.8 GPA must be earned in all teaching majors.

The purpose of the Teaching Grades PK-6 major is to prepare educators to address the needs of the whole-child; use relevant, research-based criteria to establish a supportive, engaging environment that fosters, learning; and use practices that meets the needs of all learners. This Learner-Centered major prepares the educator in areas of Literacy, Mathematics, Science, and Social Studies to teach students in grades PK-3 in a self-contained classroom or departmentalized setting.

The Teaching Grades PK-6 major is housed in the Department of Teacher and Special Education and combines courses in the departments of Teacher and Special Education, Sciences, English, Early Childhood Development and Learning, Mathematics, Social Studies, Arts, Music, Health, and Physical Education. A minimum 2.8 must be earned in this major.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of a 2.8 must be earned in the Teaching Grades PK-6 Major.
2. Complete EDU 107 with a B or higher.
3. All Professional Education Courses (list courses) must be completed with a C+ or higher.
4. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
5. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.

Classes that require a C+ or higher on the major: EDU 293, EDU 330, EDU 335, EDU 342, EDU 380, EDU 381, EDU 495, ENG 316.

Students must earn a grade of C or better in MTH 150, MTH 250, and MTH 350.

**Note:** 12 credit hours double count on the University Program.

#### Required Courses (77 hours)

BIO 165 - Life Science for Elementary Teachers 3(2-3)  
 EDU 293 - Educational Psychology for Elementary Education 3(Spec)  
 EDU 330 - Foundations of Reading Instruction 3(3-0)  
 EDU 335 - Early Literacy 3(3-0)  
 EDU 342 - Word Study and Fluency: PK-3 3(3-0)  
 EDU 380WI - Interdisciplinary Methods and Pre-Student Teaching (Math & Literacy, PK- 6) 6-10(Spec)  
 EDU 381WI - Interdisciplinary Methods and Pre-Student Teaching 6(Spec)  
 EDU 495 - Foundations of Education 3(3-0)  
 EDU 515 - Managing Classrooms and Learning Environments 3(Spec)

(continued)

EDU 533 - Diagnosis and Treatment of Reading Difficulties 3(2-3)  
 ENG 316 - Teaching Writing and Grammar, Grades 3-6 3(3-1)  
 ENG 381WI - Children's Literature 3(3-0)  
 GEL 285/GEO 285 - Earth Systems Science for Elementary Teachers 3(2-2)  
 GEO 350 - United States and Canada 3(3-0)  
 HDF 200 - Constructivism as a Tool for Learning 2(2-0)  
 HDF 360 - Integration of Content in Early Childhood through Play 4(Spec)  
 HST 210WI - United States History through Michigan Eyes 3(3-0)  
 MTH 150 - The Teaching of Counting and Whole Numbers 3(3-0)  
 MTH 250 - The Teaching of Fractions, Decimals, and Proportional Reasoning 3(3-0)  
 MTH 350 - The Teaching of Patterns, Shapes, Measurement and Data 3(3-0)  
 PHS 151QR - Introductory Physical Science I 3(2-2)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)  
 SCI 385 - Science and Engineering Practices for Teaching PK-6 2(1-2)  
 SPE 311 - Foundations in Educational Assessment 3(3-0)  
 SPE 504 - Teaching Students in Inclusive Settings 3(3-0)  
**Note:** You may count only one of EDU 342 or EDU 335.

#### Other Requirements (4 hours)

Select two from the following courses:  
 ART 345 - Art in the Elementary School 2(1-2)  
 HPE 310 - Physical Education for the Classroom Teacher 2(Spec)  
 HSC 343 - Health Education in the Elementary School 2(2-0)  
 MUS 330 - Music for Elementary Classroom Teachers 2(1-2)

**Total: 81 semester hours**

### Teaching Grades PK-3

This is an interdepartmental major. Please see the Index for page number.

### Teaching Grades PK-3 with Special Education Major

This is an interdepartmental major. Please see the Index for page number.

## Special Education Major

### Teachers of Students with Cognitive Impairment

*B.S. Ed. degree, Standard Certificate (Early Childhood and Elementary Education) or B.S. in Ed. degree, Standard Secondary Certificate*

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

**Teacher Certification - All programs are subject to changes in state certification rules and students should contact an advisor before pre-registration each semester.** A student who plans to major in special education should contact the EHS Office of Educator Preparation Programs, EHS 421, as soon as possible to initiate the Admission to Teacher Education process. Students must fulfill all requirements listed for Admission to Teacher Education programs as specified in the Teacher Certification section of this *Bulletin*.

All students preparing to become approved to teach in special education must also meet requirements for certification in general elementary or secondary education. The endorsements in cognitive impairment and emotional impairment, both K-12, require either an elementary or secondary education general education certificate. Students completing a special education endorsement will be eligible to teach special education students in grades kindergarten through twelve (or age 26).

**Before a major is declared, the student must have earned a grade of C or higher in SPE 126 (3) Introduction to Special Education.**

Students are required to complete two student teaching assignments, one in Special Education during one semester and one in General Education during another semester. Application for Special Education student teaching must be completed through the EHS Office of Educator Preparation Programs by the established deadline. Fall student teaching applications are due the preceding spring semester, and Spring student teaching applications are due the preceding fall semester, by the established deadline.

**A minimum 2.8 GPA (B-) must be earned in the Special Education major.**

For Special Education major, Teachers of students with Cognitive Impairment, the following courses require a C+ or better: SPE 322, 323, 324, 519, 521, and 522.

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#### Core Courses (24 hours)

SPE 126 - Introduction to Special Education 3(3-0)  
 SPE 322 - Curriculum and Instruction for Students with High Incidence Disabilities 6(6-0)  
 SPE 323 - Classroom Management for Students with Special Needs 3(3-0)  
 SPE 324 - Special Education Classroom-Based Assessment 6(2-8)  
 SPE 550WI - Teaching Diverse Students in Educational Settings 3(3-0)  
 SPE 570 - Career Development and Transitions 3(3-0)

**Note:** SPE 322, 323, and 324 require a C+ or better.

#### Required Courses (18 hours)

##### *Professional Sequence*

SPE 458 - Special Education Clinical Experience: Cognitive Impairment 9(Spec)  
 SPE 519 - Students with Cognitive Impairment 3(3-0)  
 SPE 521 - Teaching Students with Cognitive Impairment 3(3-0)  
 SPE 522 - Seminar in Advanced Methods for Teaching Students with Cognitive 3(3-0)

**Note:** SPE 519, 521, and 522 require a C+ or better.

**Total: 42 semester hours**

## Special Education Major

### Teachers of Students with Emotional Impairment

*B.S. Ed., Standard Certificate (Early Childhood and Elementary Education) or  
B.S. in Ed. Degree, Secondary Standard Certificate*

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

**Teacher Certification - All programs are subject to changes in state certification rules and students should contact an advisor before pre-registration each semester.** A student who plans to major in special education should contact the EHS Office of Educator Preparation Programs, EHS 421, as soon as possible to initiate the Admission to Teacher Education process. Students must fulfill all requirements listed for Admission to Teacher Education programs as specified in the Teacher Certification section of this *Bulletin*.

All students preparing to become approved to teach in special education must also meet requirements for certification in general elementary or secondary education. The endorsements in cognitive impairment and emotional impairment, both K-12, require either an elementary or secondary education general education certificate. Students completing a special education endorsement will be eligible to teach special education students in grades kindergarten through twelve (or age 26).

**Students must earn a grade of C or higher in SPE 126 (3) Introduction to Special Education.**

Students are required to complete two student teaching assignments, one in Special Education during one semester and one in General Education during another semester. Application for Special Education student teaching must be completed through the EHS Office of Educator Preparation Programs by the established deadline. Fall student teaching applications are due the preceding spring semester, and spring student teaching applications are due the preceding fall semester, by the established deadline.

**A minimum 2.8 GPA (B-) must be earned in the Special Education major.**

For Special Education Major, Teachers of Students with Emotional Impairment, the following courses require a C+ or better: SPE 322, 323, 324, 578, 579, and 581.

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#### Core Courses (24 hours)

SPE 126 - Introduction to Special Education 3(3-0)

SPE 322 - Curriculum and Instruction for Students with High Incidence Disabilities 6(6-0)

SPE 323 - Classroom Management for Students with Special Needs 3(3-0)

SPE 324 - Special Education Classroom-Based Assessment 6(2-8)

SPE 550WI - Teaching Diverse Students in Educational Settings 3(3-0)

SPE 570 - Career Development and Transitions 3(3-0)

**Note:** SPE 322, 323, and 324 require a C+ or better.

#### Required Courses (18 hours)

##### *Professional Sequence*

SPE 456 - Special Education Clinical Experience: Emotional Impairment 9(Spec)

SPE 578 - Students with Emotional Impairment 3(3-0)

SPE 579 - Teaching Students with Emotional Impairment 3(3-0)

SPE 581 - Seminar in Advanced Methods for Teaching Students with Emotional 3(3-0)

**Note:** SPE 578, 579, and 581 require a C+ or better.

**Total: 42 semester hours**

## Disability Studies and Community Inclusion Minor

This is an interdepartmental minor. Please check the index for the page number.

## Teaching English Learners Minor

This is an interdepartmental minor. Please check the index for the page number.



# » The Herbert H. and Grace A. Dow College of Health Professions

**Thomas Masterson, Ph.D., Dean**

**Greg Zimmerman, Ed.D., Associate Dean**

**HP 2217, 989-774-1850**

**[www.chp.cmich.edu](http://www.chp.cmich.edu)**

**Associated Designators:** GRN, HNS, HPS

The Herbert H. & Grace A. Dow College of Health Professions is dedicated to the development of professionals who contribute to a healthy society.

The faculty, in the respective programs, are committed to providing learning opportunities to students aspiring to enter careers in health-care, wellness, teaching or sport management. The faculty and staff are committed to fostering student and community-centered education, and to training future professionals who are knowledgeable, competent, ethical, and caring with a strong commitment to human service.

## Areas of Study

The College supports four departments and an interdisciplinary major. The College offers majors and minors leading to a Bachelor's degree, and advanced programs leading to a Master's or Doctoral degree. All programs are designed to be comprehensive and include all the academic and clinical/practical components required to prepare students for a rewarding career. The majority of CHP programs are reviewed and accredited by their specialized accrediting organization. The respective programs provide the educational elements that then allow students to challenge a certification and/or licensure exam upon graduation. Additionally, programs include training in communication, collaboration, multicultural competence, critical thinking, inter-professional education, basic sciences, social sciences, clinical/professional skills, and professional behaviors. Internships/clerkships/practicums are an integral element of the majority of programs within the College. These experiential learning opportunities often require students to submit to a background check and verify immunization status. It is the student's responsibility to insure that any legal issues (civil infractions, misdemeanors, and felony charges) are avoided that may prevent them from internship/clerkship placement, graduation, certification and/or licensure.

## Undergraduate Programs

**Majors.** Athletic Training, Communication Sciences and Disorders, Dietetics, Environmental Health & Safety, Exercise Science (Clinical Exercise Science, Health Fitness or Kinesiology Option), Health Administration, Physical Activity Specialist, Physical Education, Public Health Education, School Health Education, Sport Management. The Bachelor of Science in Nursing program is offered for current RNs to complete their studies for a bachelor's degree.

**Minors.** American Sign Language, Athletic Coaching, Communication Sciences and Disorders, Health Fitness, Nutrition, Elementary and Secondary Physical Education, Public Health, School Health Education, Sport Management, and Substance Use Disorders.

## Graduate Programs

The College offers master's degrees in Speech-Language Pathology (M.A.), Exercise Physiology (M.S.), Health Administration (M.H.A.), Public Health (M.P.H.), Sport Administration (M.A.), and Physician Assistant (M.S.), Nutrition and Dietetics (M.S.). Doctoral programs include Audiology (Au.D.), Health Administration (DHA), and Physical Therapy (D.P.T.). A health services administration concentration is also available on the Master of Science in Administration (M.S.A.) degree. Graduate Certificates are offered in Health Systems Leadership and International Health. Detailed information on graduate programs are available in the *Graduate Studies Bulletin*, the office of Graduate Studies, department offices, or the CHP Student Service Center at 989-774-2315.

## Pre-Professional Studies

CMU offers pre-professional studies in which you take foundation courses for transfer to universities offering such specialties as: dentistry, medical and health sciences, medicine and osteopathy, occupational therapy, optometry, pharmacy, physical therapy, physician assistant, and veterinary medicine. Contact the CHP Student Service Center at 989-774-2315 or the pre-health CSE advisor at 989-774-7506 for more information. As a reminder, the Pre-Professional Studies are NOT majors or minors. Students are urged to contact an academic advisor as soon as possible to discuss a plan of action.

## Residential College

The Health Professions Residential College, located in Emmons Hall, provides unique opportunities for students to carefully examine their interests and career options utilizing tremendous on-site resources. The residential college program offers these distinctive opportunities:

- Educational programs that enhance your classroom learning and facilitate your professional goals;
- Opportunity to live with others who have similar career aspirations;
- A freshman year experience course, HPS 101WI *Introduction to the Health Professions*, offering interdisciplinary topics;
- Increased opportunity for career information, advising, internships, professional networking, and information about graduate programs;
- Formal and informal out of class interactions with faculty;
- Supplemental instruction sessions and study groups;
- Co-curricular experiences.

## Student Organizations

Numerous organizations exist on campus to support students interested in the programs associated with the College. These groups provide students with opportunities to network, gain additional information on specific disciplines, and experience professional growth. Students are encouraged to contact Get Connected by searching at OrgSync [http://cmich.orgsync.com/Search\\_duplicate#](http://cmich.orgsync.com/Search_duplicate#) or contact individual departments for specific information.

## Communication Sciences & Disorders (CSD, ASL)

For information, please contact the chairperson, 989-774-1323, 2186 Health Professions Building;  
<https://www.cmich.edu/academics/colleges/herbert-h-grace-a-dow-college-of-health-professions/degrees-programs/departments/communication-sciences-and-disorders-organizations>

### Why Study Communication Sciences and Disorders?

One of every ten people has a speech, language, or hearing disorder. Communication disorders generally do not occur in isolation—they can be related to other problems as well. Social, emotional, educational, and vocational problems may stem from or be aggravated by communication disorders. Speech-language pathologists and audiologists are educated to prevent, identify, and treat communication disorders. They work primarily in educational settings, medical and health facilities, and private practice.

### Communication Sciences and Disorders at CMU

To work as a speech-language pathologist or audiologist, you are required to meet the professional qualifications of the state in which you are employed. This will require a graduate degree at the master's or doctoral level. Your study of communication disorders at the undergraduate level must be carefully tailored to lead into study at the graduate level.

The department offers a major in communication sciences and disorders, which specifically prepares students for entry into graduate speech-language pathology and audiology programs and for other career opportunities. The minor in communication sciences and disorders prepares students for career opportunities particularly related to health and education as well as for advanced educational opportunities. The minor in American Sign Language complements many majors, and helps students acquire conversational skills in American Sign Language and develop an appreciation and understanding of the way in which people in the Deaf community live, think, and communicate. Also offered is a 12-hour certificate in Deaf and Hard-of-Hearing Studies.

The Department of Communication Sciences & Disorders offers the Doctor of Audiology (Au.D) and the Master of Arts (M.A.) in Speech-Language Pathology. The undergraduate and graduate level programs are designed to complement one another and to lead to eligibility to apply for American Speech-Language-Hearing Association's (ASHA) Certificate of Clinical Competence (CCC) for students who complete the graduate degree programs. CMU's academic programs in audiology and speech-language pathology are accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA).

Early advisement is recommended for students considering a major or minor in this department. If you are interested in a career as a speech-language pathologist or audiologist, call the Department of Communication Sciences and Disorders (989-774-3471) and request advisement assistance.

### The Faculty

Katie Atkinson, Laurie Bahlke, Cheryl Barden, Jason Barden, Amanda Barone, Nicholas Barone, AnnMarie Bates, Kristen Birch, Kevin Cramer, Natalie Douglas, Nicole Ferguson, Sarah Grinn, Nicole Hacker, Barbara Jackson, Theresa Jones, Christine Kinne, Bridget LaPoint, Stacey Lim, Megan MacPherson, Kendra Miller, Susan Naeve-Velguth, Dawn Nelson, Shannon Palmer, Carolyn Parker, Claudia Pastorelli, Stephanie Richards, Mary Beth Smith, Katie Squires, Katie Strong, Janet Sturm, Yunfang Zheng

## Major

### Communication Sciences & Disorders Major

*B.A.A.; B.S. degrees*

Completion of this major will provide a student with a background in communication sciences and disorders and a foundation for application to graduate school in speech-language pathology or audiology. Students will learn about the development and use of speech, language, and hearing, and learn fundamentals of assessing and managing communication disorders. Students who major in communication sciences and disorders will complete a core of undergraduate courses and demonstrate the essential qualities and abilities considered necessary to their academic and clinical performance as outlined in the listed in the technical standards for the CSD major program. Near the end of the four years of undergraduate education, students may apply to a master's degree program in speech-language pathology (SLP), or a professional doctorate degree program in audiology (Au.D.).

With the exception of CSD 494, courses taken Credit/No Credit do not count toward a major.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

#### Admission Requirements

Admission to the CSD major is a competitive process in which a student's academic performance in the five pre admission major courses is evaluated. The average five-course GPA for admission to the major is 3.70. The Department of Communication Sciences & Disorders (CSD) accepts approximately 40 students into the CSD major each fall and spring semester. Generally, 40-50 students apply for admission to the major in each round. To apply to the CSD major, a student must complete an Application for Admission to the Undergraduate CSD Major and submit it to the department no later than December 1 for spring admission or May 1 for fall admission. Students can be enrolled in and completing CSD prerequisite courses at the time of application. Admission decisions are made by CSD faculty at the end of each semester, after final grades have been posted.

To be considered for admission a student must meet the following criteria:

(continued)

1. An overall GPA of 2.50 or higher.
2. A CSD GPA of 3.00 or higher AND a grade of C or better in each of the CSD preadmission major courses (CSD 230, CSD 278, CSD 330, CSD 331, and CSD 335). Students may retake any of these first five courses one time only. (See Item 5 below regarding an appeal.) Students may not register for CSD courses higher than 335 without acceptance into the major.
3. Completion of at least 40 semester hours of college coursework.

#### Retention & Termination Standards

1. Students must adhere to the *Essential Functions and Technical Standards for Admission and Continued Enrollment in the CSD Major*. For a copy of this document, please contact Lorie Fox ([peter31a@cmich.edu](mailto:peter31a@cmich.edu)).
2. Students must maintain a major GPA of 3.00 or higher.
3. Students must earn a grade of C or better in each major course.
4. Students must select courses in consultation with an advisor.
5. Students will not be allowed to retake any course on the CSD major beyond CSD 335. Under extraordinary circumstances, students may request an exception to this policy through a written appeal to the CSD Department chairperson, elaborating on his or her rationale for exception to this no-repeat policy.
6. If a student's overall GPA drops below 2.50, he or she will be encouraged to take courses outside the department until the overall GPA is brought back up to 2.50 or higher.
7. If a student does not continue to meet the Admission/Retention criteria, he or she may be asked to withdraw from the major. The Department maintains the right to terminate a student from the major if he or she is not progressing satisfactorily.

#### Required Courses (43 hours)

CSD 230 - Introduction to Speech, Language, and Hearing Disabilities/Differences 3(3-0)  
 CSD 278 - Normal Speech Developmental/Descriptive Phonetics 3(3-0)  
 CSD 330 - Language Development 3(3-0)  
 CSD 331 - Introduction to Audiology 3(3-0)  
 CSD 335 - The Anatomy and Physiology of Speech and Hearing 3(3-0)  
 CSD 338 - Introduction to Speech Sound Disorders 3(3-0)  
 CSD 340 - Child Language Assessment and Intervention 3(3-0)  
 CSD 417 - Introduction to Adult Communication Disorders 3(3-0)  
 CSD 431 - Audiologic Rehabilitation 3(3-0)  
 CSD 439 - Diagnostic and Intervention Methods in Speech Language Pathology 3(3-0)  
 CSD 463 - Introduction to Acoustic Phonetics 3(3-0)  
 CSD 494 - Mentored Practicum in Communication Disorders 4(2-4)  
 CSD 525 - Research Design in Communication Disorders 3(3-0)  
 CSD 551 - Autism Spectrum Disorders: A Clinical Focus 3(3-0)

#### Total: 43 hours

Additional requirements for American Speech-Language-Hearing Association (ASHA) clinical certification:

1. Completion of an accredited master's in speech-language pathology or a doctoral degree in audiology.
2. Completion of the academic and clinical requirements for the Certificate of Clinical Competence as delineated on ASHA's Knowledge and Skills Acquisition (KASA) form.
3. A course in each of the following areas:
  - a. Statistics
  - b. Biology
  - c. Physical Science, chosen from Chemistry or Physics
  - d. Social/Behavioral Sciences

For details, see the Department of Communication Sciences & Disorders in the Graduate Bulletin.

## Minors

### Communication Sciences and Disorders Minor

B.A.; B.A.A.; B.S. degrees

This minor will provide the student with background in communication sciences and disorders and a foundation for application to graduate school in audiology (see advisor for recommended courses); however, it may not be considered a minor for classroom teaching, and is not certifiable. Courses taken Credit/No Credit do not count toward a minor.

#### Core Courses (9 hours)

CSD 230 - Introduction to Speech, Language, and Hearing Disabilities/Differences 3(3-0)  
 CSD 278 - Normal Speech Developmental/Descriptive Phonetics 3(3-0)  
 CSD 331 - Introduction to Audiology 3(3-0)

#### Required Courses I (3 hours)

Select one of the following:  
 CSD 130 - Normal Speech and Language Acquisition 3(3-0)  
 CSD 330 - Language Development 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:  
 CSD 335 - The Anatomy and Physiology of Speech and Hearing 3(3-0)  
 CSD 338 - Introduction to Speech Sound Disorders 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:  
 CSD 417 - Introduction to Adult Communication Disorders 3(3-0)  
 CSD 431 - Audiologic Rehabilitation 3(3-0)  
 CSD 432WI - Clinical Communication in Speech-Language Pathology 3(3-0)

#### Elective Courses (6 hours)

Select two (2) courses from the following in consultation with an advisor (CSD 338 and 417 may not be counted as electives if they were taken as required courses):

ASL 101 - American Sign Language, Level I 3(3-0)  
 CSD 338 - Introduction to Speech Sound Disorders 3(3-0)  
 CSD 340 - Child Language Assessment and Intervention 3(3-0)  
 CSD 417 - Introduction to Adult Communication Disorders 3(3-0)  
 CSD 463 - Introduction to Acoustic Phonetics 3(3-0)  
 CSD 490 - Independent Study 1-3(Spec)  
 CSD 512 - Supporting Students with Literacy Disorders 3(3-0)  
 CSD 525 - Research Design in Communication Disorders 3(3-0)  
 CSD 551 - Autism Spectrum Disorders: A Clinical Focus 3(3-0)

#### Total: 24 semester hours

## American Sign Language Minor

*B.A.; B.A.A.; B.S. degrees*

The minor in American Sign Language (ASL) will enable students to acquire conversational skills in American Sign Language and to develop an appreciation and understanding of the way in which people in the Deaf community live, think and communicate. The ASL minor is designed for students who wish to expand their language skills and cultural knowledge to enhance other majors such as linguistics, communication sciences and disorders (speech-language pathology and audiology), journalism, business, education, theater, social work, psychology, health sciences, or other areas of study. Students minoring in American Sign Language must complete at least 15 credit hours in the minor at CMU. Transfer credits are generally restricted to courses at the 100-level and must be approved via a consultation with the ASL program adviser.

### Required Courses I (15 hours)

ASL 100 - Introduction to the Deaf Community and Deaf Culture 3(3-0)  
 ASL 101 - American Sign Language, Level I 3(3-0)  
 ASL 102 - American Sign Language, Level II 3(3-0)  
 ASL 201 - American Sign Language, Level III 3(3-0)  
 ASL 202 - American Sign Language, Level IV 3(3-0)

### Required Courses II (3 hours)

Select one of the following:

ASL 390 - Sociocultural History of the American Deaf Community 3(3-0)  
 ASL 391 - American Deaf Culture via Study Abroad in France 3(3-0)

### Electives (6 hours)

Select 6 hours in consultation with an advisor.

ASL 300 - Introduction to the DeafBlind Community 3(3-0)  
 ASL 401 - American Sign Language Level V 3(3-0)  
 ASL 402 - American Sign Language Level VI 3(3-0)  
 ASL 404 - Advanced Fingerspelling and Numbers 3(3-0)  
 ASL 510 - ASL Linguistics 3(3-0)  
 ASL 590 - Independent Study 1-4(Spec)  
 ASL 593 - Jamaica Study Abroad 3(Spec)  
 ASL 594 - ASL in Elementary Education 3(Spec)  
 ASL 595 - Community Placements with Deaf Children and Adults 3(1-3)  
 ASL 597 - American Sign Language Teaching Assistantship 3(Spec)  
 ASL 599 - Special Topics 1-6(Spec)

**Total: 24 semester hours**

## Undergraduate Certificate - Deaf and Hard-of-Hearing Studies

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

#### Admission Standards

Open to degree-seeking students of any major and non-degree-seeking individuals approved by CMU Admissions for course enrollment.

#### Completion, Retention and Termination Standards

Certificate completion will be governed by CMU standards for successful course completion (e.g., passing grades, addressing Incompletes), successfully meeting course prerequisites as appropriate, and adherence to the student code of conduct.

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#### Required Courses (12 hours)

ASL 100 - Introduction to the Deaf Community and Deaf Culture 3(3-0)  
 ASL 101 - American Sign Language, Level I 3(3-0)  
 ASL 305 - Professions Serving Persons who are Deaf or Hard-of-Hearing 3(3-0)  
 ASL 306 - Language, Modality and Technology Choices in Deafness 3(3-0)

**Total: 12 semester hours**



## School of Health Sciences

(DHA, HSC, HSL, MHA, MPH)

For information, please contact the chairperson 989-774-3541, 2219 Health Professions Building;

<https://www.cmich.edu/academics/colleges/herbert-h-grace-a-dow-college-of-health-professions/degrees-programs/departments/school-health-sciences-landing>

### Why Study Health Sciences?

There is mounting evidence that our lifestyles dramatically affect our health, well-being and longevity, as well as the dollar cost of health care. The realization that prevention is paramount to healthy living and to health care cost containment has created an interest in health education and health promotion in various public and private health settings, such as clinics, fitness centers, agencies and schools. Professionals in the health sciences are trained to help individuals improve the quality of their life by practicing healthy lifestyles.

### Health Sciences at CMU

Undergraduate majors and minors offered through the School of Health Sciences focus on preparing professionals to: 1) become fitness and exercise specialists in preventative and rehabilitative programs; 2) function in the public setting as health educators and health promotion specialists; 3) work as educators and program specialists in the field of substance abuse prevention, substance abuse intervention, and treatment; and 4) work in an administrative capacity in various health settings. The school offers the following graduate degree programs: Health Service Administration concentration on a Master of Science in Administration degree, Master of Science in Exercise Physiology, Master of Public Health, Master of Health Administration, and the Doctor of Health Administration. Further information is available in the *Graduate Studies Bulletin*.

### The Faculty

Steven Berkshire, Jeffery Betts, Jodi Brookins-Fisher, Mark Cwiek, Nailya DeLellis, Jeffrey Edwards, Adam George, Salma Haidar, Christopher Hunt, Jeff Inungu, Lana Ivanitskaya, Roop Jayaraman, James Johnson, Bernard Kerr, Andrew Kim, Tina Kopka, Thomas Kozal, Nicholas Kruse, Mary Kushion, Marty Malcolm, Rachael Nelson, Al Nowak, Paul O'Connor, Naveen Sharma, Frank Snyder, Leslie Wallace, David Wisner, Dimitrios Zikos, Micah Zuhl

## Majors

The following majors are available through this department: 1) Health Administration, 2) Exercise Science, and 3) Public Health Education.

### Health Administration Major

B.A.A.; B.S. degrees

This major prepares students for entry level administrative positions in a variety of health settings. It also prepares individuals who have preparation in an allied health field for middle management positions such as department head or supervisor.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

##### Admission Requirements

To be considered for admission to the Health Administration Major, a student must meet the following criteria:

1. An overall GPA of 2.50 or higher.
2. A grade of C+ or better in each of the five Health Administration preparatory courses (ACC 201 or 250, STA 282QR or PSY 211QR, COM 267 or COM 357, ENG 101 and ENG 201). Students may not register for other HSC Health Administration courses on the major without first being accepted into the major or having a formal Intent-to-Major form completed. The total credits in preparatory courses to declare the major is 15 credit hours. Students are reminded that some courses may have additional prerequisites before they can enroll in the course.
3. TOEFL Internet Based Test (iBT) exam is required if a student is from a non-English speaking country. Applicants must achieve a minimum overall score of 94 with the following minimum scores:
  - Reading 22 minimum
  - Listening 22 minimum
  - Speaking 26 minimum
  - Writing 24 minimum
4. Written evidence of consulting with a Health Administration advisor.
5. Completion of at least 30 semester hours of college coursework.

##### Retention & Termination Standards

1. Students must maintain a Major GPA of 2.67 or higher.
2. Students must earn a grade of C+ or higher in each major course. Credit/no credit coursework will not count on any course on this major, except for the internship experience (HSC 595).
3. Students must maintain an overall GPA of 2.50 or higher.

If a student does not meet the Admission Requirements or does not continue to meet the Retention Standards, he/she may request an exception to the policy by completing the required form and submitting to the Division Director for consideration. The request for an exception must state the rationale for the exception and any documentation needed to support the exception, including any plans, if any, for correcting deficiencies.

##### Required Courses (45 hours)

HSC 203WI - Leadership for the Health Professions 3(3-0)  
 HSC 317 - Community Health 3(3-0)  
 HSC 333 - Managing the Health of Populations 3(3-0)  
 HSC 500 - Health Informatics 3(3-0)  
 HSC 507 - Introduction to Health Service Organizations and Systems 3(3-0)  
 HSC 520 - Health Services Administration 3(3-0)  
 HSC 538WI - Development of Proposals and Reports in Health Administration 3(3-0)  
 HSC 544 - Biostatistics 3(2-1)  
 HSC 545 - Health Planning 3(3-0)  
 HSC 570 - Financial Aspects of Health Services Organizations 3(3-0)  
 HSC 571 - Legal Aspects of Health Services Organizations 3(3-0)  
 HSC 572 - Quality Improvement in Health Services 3(3-0)  
 HSC 595 - Health Administration Internship 6(6-0)  
 MKT 300 - Introduction to Marketing 3(3-0)

##### Other Requirement (3 hours)

Select one of the following:  
 ECO 201 - Principles of Macroeconomics 3(3-0)  
 ECO 202 - Principles of Microeconomics 3(3-0)  
 ECO 203 - Microeconomic Principles for Business 3(3-0)

**Electives (6 hours)**

Select from the following courses or other courses approved by the student's major advisor:

HDF 247 - Introduction to Gerontology 3(3-0)  
 HSC 201 - Medical Terminology 3(3-0)  
 HSC 516 - Travel Course in Health Education 1-15(Spec)  
 HSC 526 - Behavioral Health 3(3-0)  
 HSC 552 - International Health Systems, Organizations and Policy 3(3-0)  
 HSC 581 - Managed Care: Origins, Organizations, and Operations 3(3-0)  
 HSC 591 - Legal & Regulatory Aspects of Long-Term Care 3(3-0)  
 HSC 592 - Administration Issues in Long-Term Care 3(3-0)  
 HSC 593 - Resident Care Issues in Long-Term Care Administration 3(3-0)

**Total: 54 semester hours**

**Exercise Science Major**

B.A., B.A.A., B.S. degrees

**ADMISSIONS REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Any student in good academic standing at CMU may declare a major in any of the three Exercise Science major options. Interested students are encouraged to obtain advising early during their academic career in order to ensure that they select the option on the major most appropriate for their academic and career goals. To progress through the curriculum in a timely manner, students are responsible for completing the classes in the requisite order. Upper-level classes will often have prerequisite lower-level classes that you must successfully complete before you may enroll in the following classes.

In order to remain a major in Exercise Science, a student must meet the following criteria

1. Meet specific program Technical Standards (a copy of the Technical Standards is available from the School of Health Sciences Office or the School of Health Sciences website; students must sign a copy of the Technical Standards at the time they declare their Exercise Science major thereby acknowledging that they have read, understand, and are able to meet these standards).
2. Maintain an overall GPA of at least 2.5.
3. Achieve a grade of C (2.0) or better for each graded HSC course on the major.

**Options**

Select one of the following three options:

**Clinical Exercise Science Option**

The Clinical Exercise Science option is for students intending to pursue a career in the clinical aspects of exercise science: cardiopulmonary rehabilitation, diagnostic testing, or other related field.

**Core Courses I (17 hours)**

HSC 190 - Introduction to Exercise Science 1(1-0)  
 HSC 205 - Responding to Emergencies 2(1-2)  
 HSC 212 - Applied Anatomy and Kinesiology 3(3-1)  
 HSC 214 - Human Anatomy 4(3-3)  
 HSC 215 - Human Physiology 4(3-2)  
 HSC 308 - Physiology of Sport and Exercise 3(3-0)

**Core Courses II (5-8 hours)**

Select one of the following options:

**Option A (8 hours)**

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)

**Option B (5 hours)**

CHM 120 - Survey of Chemistry 4(4-0)  
 CHM 127 - Introductory Chemistry Laboratory 1(0-2)

**Required Courses (27 hours)**

HSC 220 - Health-related Components of Fitness 3(2-2)  
 HSC 310 - ECG Assessment 2(2-1)  
 HSC 411 - Pathophysiology 3(3-0)  
 HSC 547 - Health Risk Identification and Management 3(3-0)  
 HSC 550 - Stress Test Administration 3(2-2)  
 HSC 551 - Stress Testing Interpretation 3(3-1)  
 HSC 553 - Cardiac Medications 2(2-0)  
 HSC 575 - Exercise Science Clinical Internship 8(Spec)

**Other Requirements (0 hours)**

*Capstone Exit Exam and/or Survey*

This requirement would involve completing an internship and completing an exit survey.

**Electives (5-6 hours)**

Select from the following:

BIO 590 - Cardiovascular Physiology 3(3-0)  
 HSC 201 - Medical Terminology 3(3-0)  
 HSC 219 - Exercise Conditioning for Health Fitness Professionals 2(1-2)  
 HSC 315WI - Critical Analysis of Contemporary Issues in Exercise and Health Science 3(3-0)  
 HSC 503 - Health Implications of Obesity 3(3-0)  
 HSC 534 - Workshop in Principles of Cardiovascular Health and Disease 1(Spec)  
 HSC 586 - Cardiovascular Disease Risk Factors in Children 3(1-4)  
 NDS 370 - Nutrition 3(3-0)

**Total: 54-58 semester hours**

**Health Fitness and Performance Option**

The Health Fitness and Performance option is for students intending to pursue a career as a health fitness professional, personal trainer, or strength and conditioning coach.

**Note:** Students pursuing this option cannot declare the Health Fitness Minor.

**Core Courses I (17 hours)**

HSC 190 - Introduction to Exercise Science 1(1-0)  
 HSC 205 - Responding to Emergencies 2(1-2)  
 HSC 212 - Applied Anatomy and Kinesiology 3(3-1)  
 HSC 214 - Human Anatomy 4(3-3)  
 HSC 215 - Human Physiology 4(3-2)  
 HSC 308 - Physiology of Sport and Exercise 3(3-0)

**Core Courses II (5-8 hours)**

Select one of the following options:

**Option A (8 hours)**

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)

**Option B (5 hours)**

CHM 120 - Survey of Chemistry 4(4-0)  
 CHM 127 - Introductory Chemistry Laboratory 1(0-2)

**Required Courses (21 hours)**

HSC 219 - Exercise Conditioning for Health Fitness Professionals 2(1-2)  
 HSC 420 - Fitness and Performance Assessment 3(2-3)  
 HSC 421 - Training for Fitness and Performance 3(2-3)  
 HSC 423 - Practicum in Personal Training 2(1-3)  
 HSC 425 - Health Fitness Program Administration/Management 3(3-0)  
 HSC 576 - Exercise Science Fitness Internship 8(Spec)

**Other Requirements (0 hours)**

*Capstone Exit Exam and/or Survey*

This requirement would involve completing an internship and taking an exit survey.

**Electives (10-12 hours)**

Select from the following:

ENT 221 - Marketing Strategies for Entrepreneurs 3(3-0)  
 HSC 315WI - Critical Analysis of Contemporary Issues in Exercise and Health Science 3(3-0)  
 HSC 424 - Practicum in Health Fitness 2(0-6)  
 HSC 503 - Health Implications of Obesity 3(3-0)  
 HSC 505 - Work Injury Prevention 3(3-0)  
 HSC 547 - Health Risk Identification and Management 3(3-0)  
 NDS 370 - Nutrition 3(3-0)  
 NDS 375WI - Nutrition and Performance 3(3-0)  
 PES 338 - Teaching Group Fitness 2(2-0)  
 PES 485 - Theoretical Foundations of Strength and Conditioning 3(3-0)

**Total: 53-58 semester hours**

### Kinesiology Option

The Kinesiology option is a broad-based exercise science option for students interested in pursuing a graduate or professional degree in exercise physiology, kinesiology, physical therapy, physician assistant medical and health sciences, occupational therapy, chiropractic, or other allied health field.

Please note that many graduate and professional programs require prerequisite courses in addition to those included in this option. It is the responsibility of the student to determine which prerequisite courses are required for their program of interest.

#### Core Courses I (17 hours)

HSC 190 - Introduction to Exercise Science 1(1-0)  
HSC 205 - Responding to Emergencies 2(1-2)  
HSC 212 - Applied Anatomy and Kinesiology 3(3-1)  
HSC 214 - Human Anatomy 4(3-3)  
HSC 215 - Human Physiology 4(3-2)  
HSC 308 - Physiology of Sport and Exercise 3(3-0)

#### Core Courses II (8-9 hours)

Select one of the following options

##### Option A (8 hours)

CHM 131 - General Chemistry I 4(3-3)  
CHM 132 - General Chemistry II 4(3-3)

##### Option B (9 hours)

CHM 120 - Survey of Chemistry 4(4-0)  
CHM 127 - Introductory Chemistry Laboratory 1(0-2)  
CHM 342 - Survey of Organic Chemistry 4(3-3)

#### Required Courses (12 hours)

HSC 220 - Health-related Components of Fitness 3(2-2)  
HSC 411 - Pathophysiology 3(3-0)  
HSC 490WI - Kinesiology Capstone 3(3-0)  
HSC 547 - Health Risk Identification and Management 3(3-0)

#### Other Requirements I (3 hours)

Select one of the following:

BIO 315 - Human Genetics 3(3-0)  
CHM 421 - Introductory Biochemistry for Health Sciences 3(3-0)  
NDS 370 - Nutrition 3(3-0)

#### Other Requirements II (3 hours)

Select one of the following:

BIO 500 - Biological Statistics 3(2-2)  
HSC 544 - Biostatistics 3(2-1)  
PSY 211QR - Introduction to Psychological Statistics 3(3-0)

#### Other Requirements (0 hours)

Capstone Exit Exam and/or Survey

This requirement would involve taking a capstone course or analyzing and interpreting data, and completing an exit survey.

#### Electives (9-12 hours)

Select from the following:

BIO 208 - Microbiology 4(3-3)  
BIO 590 - Cardiovascular Physiology 3(3-0)  
HSC 201 - Medical Terminology 3(3-0)  
HSC 219 - Exercise Conditioning for Health Fitness Professionals 2(1-2)  
HSC 315WI - Critical Analysis of Contemporary Issues in Exercise and Health Science 3(3-0)  
HSC 503 - Health Implications of Obesity 3(3-0)  
HSC 586 - Cardiovascular Disease Risk Factors in Children 3(1-4)  
NDS 375 - Nutrition and Performance 3(3-0)  
PES 302 - Fundamentals of Motor Learning 3(3-0)

**Total: 52-56 semester hours**

### Public Health Major:

#### Public Health Education Concentration and Pre-Health Professional Concentration

*B.A., B.A.A., B.S. degrees*

The purpose of this major is to prepare students for careers in a variety of official, voluntary, community-based organizations, private health agencies, health departments, and hospitals. The major has two concentrations (Public Health Education and Pre-Health Professional). Students will decide if they want an education or clinical focus. Please see the descriptions below.

**Pre-Health Professional:** Undergraduate students who plan to apply to medical and graduate training programs and would like to gain public health skills can benefit from the pre-health professional concentration. This concentration is designed to provide students with public health skills and prepare students for entry into professional training programs such as medicine and physician assistant programs.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students interested in this major are encouraged to obtain advising and admission information early during the pre-admission coursework by contacting a faculty advisor.

##### Admission Standards

To declare this major, a student must meet the following criteria:

1. Complete at least 30 credit hours;
2. Complete the following courses HSC 106QR, HSC 110, PSY 211QR or STA 282QR;
3. Earn an overall GPA of 2.50 or higher;
4. Meet specific program Technical Standards. A copy of the Technical Standards is available on the program's website.

##### Retention & Termination Standards

Once a student signs the major, students will sign an agreement of Technical Standards for the major.

In addition to meeting Technical Standards, the following criteria must also be met:

1. Earn a grade of C or higher in each HSC course in the major;
2. Maintain a GPA of 2.50 or higher in the major.
3. If a student does not meet the Admission Requirements or does not continue to meet the Retention and/or Technical Standards, he/she may be dismissed from the major. Appeals will be considered. The program maintains the right to terminate a student from the major if he or she is not progressing satisfactorily.

Credit/No Credit coursework will not count on any course on this major, except for the internship experience, HSC 599. This course has been approved and is often offered as a Service Learning (SL) course.

#### Public Health Core Courses I (27 hours)

HSC 106QR - Healthy Lifestyles 3(2-1)  
HSC 110 - Introduction to Public Health 3(3-0)  
HSC 352 - Environmental Health 3(3-0)  
HSC 404 - Epidemiology 3(3-0)  
HSC 520 - Health Services Administration 3(3-0)  
HSC 526 - Behavioral Health 3(3-0)  
HSC 544 - Biostatistics 3(2-1)  
HSC 599 - Internship - Public Health 6(Spec)

#### Public Health Core Courses II (3 hours)

Select one of the following:

PSY 211QR - Introduction to Psychological Statistics 3(3-0)  
STA 282QR - Introduction to Statistics 3(3-0)

#### Concentrations

Select one of the following concentrations:

## Public Health Education Concentration

### Required Concentration Courses (32 hours)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)  
 HSC 211 - Human Anatomy and Physiology 3(3-0)  
 HSC 221 - Public Health Theory 3(3-0)  
 HSC 317 - Community Health 3(3-0)  
 HSC 319 - Methods and Materials in Community Health Education 3(3-0)  
 HSC 325 - Public Health Policy and Advocacy 3(3-0)  
 HSC 418 - Professional Aspects of Health Education 2(2-0)  
 HSC 419WI - Community Health Assessment, Planning and Program Evaluation 3(3-0)  
 HSC 532 - Diversity Issues in the Health Professions 3(3-0)  
 HSC 538WI - Development of Proposals and Reports in Health Administration 3(3-0)  
 HSC 590 - Public Health and Social Justice 3(3-0)

**Total: 62 semester hours**

## Pre-Health Professional Concentration

### Required Concentration Courses I (7-8 hours)

Select one of the following options:

#### Option A (7 hours)

BIO 101 - General Biology 3(2-2)  
 BIO 208 - Microbiology 4(3-3)

#### Option B (8 hours)

BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 BIO 112 - Foundations of Cell Biology 4(3-3)

### Required Concentration Courses II (5-8 hours)

Select one of the following options:

#### Option A (5 hours)

CHM 120 - Survey of Chemistry 4(4-0)  
 CHM 127 - Introductory Chemistry Laboratory 1(0-2)

#### Option B (8 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)

### Required Concentration Courses III (4-8 hours)

Select one of the following options:

#### Option A (4 hours)

CHM 342 - Survey of Organic Chemistry 4(3-3)

#### Option B (8 hours)

CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)

### Electives (9-12 hours)

Select from the following:

BIO 211 - Foundations of Genetics 4(3-3)  
 BIO 315 - Human Genetics 3(3-0)  
 BIO 392 - Mammalian Physiology 4(3-3)  
 CHM 421 - Introductory Biochemistry for Health Sciences 3(3-0)  
 CHM 520 - Introductory Biochemistry 3(3-0)  
 CHM 521 - Biochemistry I 3(3-0)  
 CHM 522 - Biochemistry II 3(3-0)  
 GEO 203QR - Introduction to Geographic Information Science 3(2-2)  
 HSC 211 - Human Anatomy and Physiology 3(3-0)  
 HSC 214 - Human Anatomy 4(3-3)  
 HSC 215 - Human Physiology 4(3-2)  
 HSC 221 - Public Health Theory 3(3-0)  
 HSC 317 - Community Health 3(3-0)  
 HSC 319 - Methods and Materials in Community Health Education 3(3-0)  
 HSC 325 - Public Health Policy and Advocacy 3(3-0)  
 HSC 411 - Pathophysiology 3(3-0)

HSC 418 - Professional Aspects of Health Education 2(2-0)  
 HSC 419WI - Community Health Assessment, Planning and Program Evaluation 3(3-0)  
 HSC 532 - Diversity Issues in the Health Professions 3(3-0)  
 HSC 538WI - Development of Proposals and Reports in Health Administration 3(3-0)  
 HSC 590 - Public Health and Social Justice 3(3-0)  
 PHY 130QR - College Physics I 4(4-0)  
 PHY 131 - College Physics II 4(4-0)  
**Note:** HSC 211 or HSC 214/HSC 215.

**Total: 55-66 semester hours**

## Minors

### Public Health Minor

*B.A.; B.A.A.; B.S. degrees*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students must earn a grade of C or higher in each HSC course in this minor.

Credit/No Credit coursework will not count on any course in this minor.

**Note:** There is considerable overlap of health content courses with the present major in Public Health Education. For this reason, students with a major in Public Health Education may not minor in Public Health.

#### Required Courses (12 hours)

HSC 317 - Community Health 3(3-0)  
 HSC 352 - Environmental Health 3(3-0)  
 HSC 526 - Behavioral Health 3(3-0)  
 HSC 590 - Public Health and Social Justice 3(3-0)

#### Electives (9 hours)

Select from the following:

COM 195 - Intercultural Communication 3(3-0)  
 COM 560 - Communication and Social/Organizational Change 3(3-0)  
 ENV 300 - Environmental Justice: Race, Gender, Poverty 3(3-0)  
 HDF 213/WGS 213 - Introduction to Human Sexuality 3(3-0)  
 HSC 107 - Drugs and the Athlete 1(1-0)  
 HSC 235 - Psychoactive Drugs 3(3-0)  
 HSC 520 - Health Services Administration 3(3-0)  
 HSC 523 - AIDS Education 1(1-0)  
 HSC 529 - Alcohol Education Workshop 1(1-0)  
 HSC 530 - Drug Abuse Workshop 1(Spec)  
 NDS 370 - Nutrition 3(3-0)  
 SOC 100 - Introductory Sociology 3(3-0)  
 SOC 323 - Racism and Inequality 3(3-0)

#### Notes:

- Other courses may be selected with advisor approval.
- Select only one of HSC 235 or HSC 529.
- Select only one of HSC 235 or HSC 530.

**Total: 21 semester hours**



## Health Fitness and Performance Minor

*B.A., B.A.A., B.S., and B.S.A.T. degrees*

This minor is designed for the Exercise Science major (Clinical Exercise Science or Kinesiology options), or Athletic Training/Sports Medicine or Athletic Training (BSAT) majors preparing to work in the fitness or sports performance industry, and intending to obtain certifications available in the field of health fitness, e.g., personal training, health fitness professional and strength and conditioning.

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students intending to minor in Health Fitness and Performance must meet the following requirements:

1. Achieve a grade of C (2.0), or better, for each graded HSC course on the minor;
2. Maintain an overall GPA of 2.5, and a GPA of 2.8 for all classes on the minor.

**Note:** Exercise Science majors selecting the Health Fitness and Performance Option may not minor in Health Fitness.

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### Core Courses (9 hours)

HSC 211 - Human Anatomy and Physiology 3(3-0)  
HSC 212 - Applied Anatomy and Kinesiology 3(3-1)  
HSC 308 - Physiology of Sport and Exercise 3(3-0)

### Required Courses (12 hours)

HSC 219 - Exercise Conditioning for Health Fitness Professionals 2(1-2)  
HSC 420 - Fitness and Performance Assessment 3(2-3)  
HSC 421 - Training for Fitness and Performance 3(2-3)  
HSC 423 - Practicum in Personal Training 2(1-3)  
HSC 424 - Practicum in Health Fitness 2(0-6)

### Electives (3 hours)

Select in consultation with an advisor.

**Total: 24 semester hours**

## Substance Use Disorders Minor

*B.A.; B.A.A.; B.S. degrees*

This minor is designed for professionals wishing to work in roles or settings requiring knowledge and intervention skills relative to alcohol and other drugs.

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students must achieve a grade of C (2.0) or better for each HSC course.

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### Required Courses (18 hours)

HSC 235 - Psychoactive Drugs 3(3-0)  
HSC 236 - Substance Abuse Intervention Programming 3(3-0)  
HSC 317 - Community Health 3(3-0)  
HSC 526 - Behavioral Health 3(3-0)  
HSC 532 - Diversity Issues in the Health Professions 3(3-0)  
HSC 598 - Nature and Dynamics of Destructive Health Habits 3(3-0)

### Electives (6 hours)

Select from the following list with approval of an advisor.

HDF 411 - Families in Social, Legal, & Political Contexts 3(3-0)  
HSC 106QR - Healthy Lifestyles 3(2-1)  
HSC 211 - Human Anatomy and Physiology 3(3-0)  
HSC 319 - Methods and Materials in Community Health Education 3(3-0)  
HSC 350 - Community Service in the Health Educators 2(2-0)  
HSC 510 - Independent Reading Experience 1-4(Spec)  
HSC 512 - Special Topics in Health Education 1-12(Spec)  
HSC 523 - AIDS Education 1(1-0)  
HSC 537 - Stress Reduction Workshop 1(Spec)  
NDS 370 - Nutrition 3(3-0)  
PSY 220 - Developmental Psychology 3(3-0)  
PSY 250 - Abnormal Psychology 3(3-0)  
PSY 350 - Clinical Interviewing and Counseling 3(3-0)  
SOC 221 - Social Problems 3(3-0)  
SOC 324 - Criminology 3(3-0)  
SOC 411 - The Family 3(3-0)  
SWK 250 - Social Welfare Policies and Services I 3(3-0)

**Total: 24 semester hours**

## Physical Education and Sport

(HPE, PES, PED)

For information, please contact the chairperson, 989-774-6679, SAC 194;

<https://www.cmich.edu/academics/colleges/herbert-h-grace-a-dow-college-of-health-professions/degrees-programs/departments/department-physical-education-sport>

### Why Study Physical Education and Sport?

In your daily life, you regularly utilize human movement. In fact, if your physical abilities are compromised at all, on either a temporary or permanent basis, your dependence on physical movement is readily apparent.

You can study physical education and sport no matter what your interest level - from thorough study of kinesiology (the study of physiology and human movement) to participation in a particular sport for the purpose of personal enjoyment. If you are interested in developing your fullest potential through the unique medium of human movement, you are interested in physical education and sport.

### Physical Education and Sport at CMU

Programs in physical education and sport at CMU focus on: (1) the preparation of students to allow them to pursue careers in health and physical education, sport and related professions; (2) the in-depth study of physical education and sport; and (3) the teaching of basic skills in a wide range of activities.

Curricular offerings lead to the Bachelor of Science, Bachelor of Science in Education, Bachelor of Arts, Bachelor of Applied Arts, and Master of Arts in Sport Administration. The degree programs can prepare you for a career in health and physical education, athletic coaching, and sport management. Interdisciplinary programs may meet your needs if you have sport-related career goals. Many classes involve active participation in sport and fitness activities.

### PED Limitation

PED-designated courses are subject to a limitation of six (6) hours toward curricular requirements for graduation.

### The Faculty

Steven E. Adler, H. Ray Allen, Daniel E. Ballou, Judy P. Chandler, Andrew S. Criswell, Rick C. Ferkel, Kevin M. Fisher, Scott R. Hirko, Marcia J. Mackey, Vincent E. Mumford, Tracy W. Olrich, Benjamin R. Rollenhagen, Janet L. Smith, Scott J. Smith, Stephen M. Thompson

## Majors

### Health and Physical Education Major

*B.S. in Ed. degree, Standard Secondary Certificate*

If you have a passion for health, fitness, and working with youth to improve their quality of life, a degree in health and physical education is right for you. Currently, the health trends of our nation continue to decline as obesity, hypokinetic disease, mental health issues, substance abuse, and many more health complications are rising. As a health and physical educator, you will be prepared to be the front line of defense to educate and induce behavioral change in K-12 students to improve their health and wellbeing for a lifetime.

As a health and physical education major, you will be equipped with the following knowledge and skills to teach:

- Health concepts such as nutrition, physical fitness, mental health, substance abuse prevention, sexual health, and disease prevention,
- Functional motor competency,
- Resistance and cardiovascular training techniques,
- Fitness plan development,
- Lifelong physical activities.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

The major in Health and Physical Education leads to certification to teach health and physical education in grades K-12.

1. Prior to declaring the major, the student must have an overall 2.5 GPA.
2. Students must earn a grade of C+ or higher in HPE 215WI, HPE 346, HPE 348, HPE 386, and HPE 435 in order to graduate with this major.
3. Students must be competent in the Health and Physical Education professional dispositions. Students failing to meet the professional

dispositions will be removed from the major and may result in removal from teacher education.

4. Students must pass a prescribed cardiovascular fitness test during the semester enrolled in HPE 435 in order to graduate with this major.
5. To gain approval to student teach, each student must:
  - have an overall GPA of 2.8;
  - have received a grade of C+ or higher in HPE 215WI, 346, 348, 386, and 435;
6. At least 15 hours of this major must be completed at CMU.
7. A minimum 2.8 GPA (B-) must be earned in all teaching majors.

#### Required Courses (47 hours)

HPE 215WI - Health and Physical Education Curriculum and Programming 4(4-0)  
 HPE 222 - Sexuality in Health Education 3(3-0)  
 HPE 223 - Basic Health Concepts I 3(3-0)  
 HPE 224 - Basic Health Concepts II 3(3-0)  
 HPE 316 - Assessment in Health and Physical Education 3(3-0)  
 HPE 323 - Applied Skills & Methods - Individual and Team Sports 3(3-0)  
 HPE 325 - Applied Skills & Methods in Fitness Education 3(2-1)  
 HPE 344 - Methods in Elementary Health and Physical Education 3(3-0)  
 HPE 346 - Methods in Secondary Health Education 3(3-0)  
 HPE 348 - Methods in Secondary Physical Education 3(3-0)  
 HPE 386 - Adapted Physical Education 3(3-0)  
 HPE 425 - Clinical Experience in Health and Physical Education 2(Spec)  
 HPE 435 - Professional Aspects in Health and Physical Education 3(3-0)  
 PES 115 - Motor Development 2(2-0)  
 PES 186QR - Principles of Physical Fitness for Lifelong Wellness 3(3-0)  
 PES 302 - Fundamentals of Motor Learning 3(3-0)

**Total: 47 semester hours**

## Physical Activity Specialist Major

B.A.; B.A.A.; B.S. degrees

This major is a professional option for students interested in pursuing a career in the field of physical activity without pursuing teacher education. Graduates will have the foundational knowledge to prepare for careers in fields such as fitness, recreation, wellness programming, and coaching. The option also provides another avenue toward graduation for those in a teaching major who decide after time not to pursue a teaching degree.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. At least 15 hours of this major must be completed at CMU.
2. Up to 3 hours may be taken as credit/no credit..

### Required Courses (35 hours)

HPE 215WI - Health and Physical Education Curriculum and Programming 3(3-0)  
 HPE 223 - Basic Health Concepts I 3(3-0)  
 HPE 224 - Basic Health Concepts II 3(3-0)  
 HPE 316 - Assessment in Health and Physical Education 3(3-0)  
 HPE 323 - Applied Skills & Methods - Individual and Team Sports 3(3-0)  
 HPE 325 - Applied Skills & Methods in Fitness Education 3(2-1)  
 HPE 386 - Adapted Physical Education 3(3-0)  
 PES 115 - Motor Development 2(2-0)  
 PES 186QR - Principles of Physical Fitness for Lifelong Wellness 3(3-0)  
 PES 279 - Sport First Aid and Athletic Emergencies 3(3-0)  
 PES 301 - Exercise Psychology 3(3-0)  
 PES 302 - Fundamentals of Motor Learning 3(3-0)

### Electives (15 hours)

Must select at least one course from each area:

#### Coaching and Performance

PES 125 - Principles and Foundations of Coaching 3(3-0)  
 PES 225 - Athletic Conditioning for Coaches 3(3-0)  
 PES 304 - Youth Sports and Diverse Learners 3(3-0)  
 PES 311 - Psychology of Coaching 3(3-0)  
 PES 485 - Theoretical Foundations of Strength and Conditioning 3(3-0)

Note: PES 304 fulfills UP group IV-A.

#### Generalist

HDF 247 - Introduction to Gerontology 3(3-0)  
 NDS 370 - Nutrition 3(3-0)  
 PES 224 - WSI-Swimming and Water Safety 3(2-2)  
 RPL 218 - Teaching of Outdoor Skills 3(3-0)

Note: HDF 247 fulfills UP group III-A and may be offered as WI.

#### Health and Physical Education K-12 Teaching

HPE 222 - Sexuality in Health Education 3(3-0)  
 HPE 340 - Curriculum and Planning School Health Programs 3(3-0)  
 HPE 344 - Methods in Elementary Health and Physical Education 3(3-0)  
 HPE 348 - Methods in Secondary Physical Education 3(3-0)  
 HPE 435 - Professional Aspects in Health and Physical Education 3(3-0)

**Total: 50 semester hours**

## Sport Management Major

B.A.; B.A.A.; B.S.; degrees

Selection of this major is to prepare students for a career in sport management. Career options include high school, collegiate, amateur, and professional sport management, sport business management, coaching, or employment with non-profit sport agencies. Coordinated major/minor programs are available on an interdepartmental basis to broaden the employment opportunities in sport retail, merchandising, journalism, broadcasting, or event management. Such coordinated programs require early advisement. Students who desire to pursue one of the career opportunities should contact the department of physical education and sport for early advisement.

This major is accredited by the Commission on Sport Management Accreditation (COSMA).

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students must earn a grade of B- or higher in PES 119, PES 180, PES 293, PES 480, and PES 499; a grade of C or better in PES 218QR, PES 280, PES 318, PES 360, PES 380, and PES 564WI in order to graduate with this major.
2. Students are strongly advised to select elective courses in consultation with a Sport Management advisor.
3. In order to graduate with this major a student must obtain a 2.5 overall GPA and a 2.7 GPA in the major.
4. At least 18 credit hours of coursework within the major must be taken at CMU.

### Required Courses I (31-43 hours)

PES 119 - Introduction to Sport Management 3(3-0)  
 PES 180 - Sport Management Governance & Organizational Theory 3(3-0)  
 PES 218QR - Sport Analytics 3(3-0)  
 PES 280 - Economics & Finance in the Sport Industry 3(3-0)  
 PES 293 - Field Study in Sport Management 1-4(Spec)  
 PES 318 - Social, Historical, & Global Issues in Sport 3(3-0)  
 PES 360 - Sport Sales & Marketing 3(3-0)  
 PES 380 - Sport Communication & Mass Media 3(3-0)  
 PES 480 - Integration of Sport Management Theory & Practice 3(Spec)  
 PES 499 - Internship in Sport Management 1-12(Spec)  
 PES 564WI - Sport Governance: Ethics, Morals, & Values 3(3-0)

**Note:** A minimum of 3 hours of PES 499 must be completed.

### Required Courses II (3 hours)

Select one of the following:

ACC 201 - Concepts of Financial Accounting 3(3-0)  
 ENT 210 - Accounting Concepts for Entrepreneurs 3(3-0)

### Electives (0-6 hours)

May select any of the following:

ART 231 - Introduction to Graphic Design 3(0-6)  
 BLR 202 - Legal Environment of Business 3(3-0)  
 COM 361 - Interpersonal Communication 3(3-0)  
 ECO 211 - Economics of Professional Team Sports 3(3-0)  
 JRN 350 - Public Relations Principles and Practices 3(3-0)

**Total: 40-46 semester hours**

## Minors

### Sport Management Minor

*B.A.; B.S.; B.A.A.; B.S. in B.A. degrees*

The minor is designed for students who wish to pursue a career in one of the areas of sport management or related professions. Students are advised that coordinated major/minor programs are available on an interdepartmental basis to provide the student with the background necessary to enter such fields as sports business management, sports retailing and merchandising, sports journalism, sports broadcasting, athletic administration, and coaching. Students who desire to pursue one of these career opportunities should contact the Department of Physical Education and Sport for early assignment to an advisor.

This minor is accredited by the Commission on Sport Management Accreditation (COSMA).

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students must earn a grade of B- or higher in PES 119, PES 180, PES 293; and a grade of C or better in PES 218QR, PES 280, PES 318, PES 360 or PES 380, and PES 564WI in order to graduate with this minor. If PES 499 is selected as an elective, a B- or higher must be earned.
2. Students are strongly advised to select elective courses in consultation with a Sport Management advisor.
3. In order to graduate with this minor, a student must obtain a 2.5 overall GPA and a 2.7 GPA in the minor.
4. At least 12 credit hours of coursework within the minor must be taken at CMU.

#### Required Courses (19-22 hours)

PES 119 - Introduction to Sport Management 3(3-0)  
 PES 180 - Sport Management Governance & Organizational Theory 3(3-0)  
 PES 218QR - Sport Analytics 3(3-0)  
 PES 280 - Economics & Finance in the Sport Industry 3(3-0)  
 PES 293 - Field Study in Sport Management 1-4(Spec)  
 PES 318 - Social, Historical, & Global Issues in Sport 3(3-0)  
 PES 564WI - Sport Governance: Ethics, Morals, & Values 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:  
 PES 360 - Sport Sales & Marketing 3(3-0)  
 PES 380 - Sport Communication & Mass Media 3(3-0)

#### Electives (0-3 hours)

Select from the following:  
 ACC 201 - Concepts of Financial Accounting 3(3-0)  
 ART 231 - Introduction to Graphic Design 3(0-6)  
 BLR 202 - Legal Environment of Business 3(3-0)  
 COM 357 - Public Speaking 3(3-0)  
 COM 361 - Interpersonal Communication 3(3-0)  
 ECO 211 - Economics of Professional Team Sports 3(3-0)  
 ENT 210 - Accounting Concepts for Entrepreneurs 3(3-0)  
 JRN 350 - Public Relations Principles and Practices 3(3-0)  
 PES 499 - Internship in Sport Management 1-12(Spec)

**Total: 24 semester hours**

### Athletic Coaching Minor

*B.A.; B.S.; B.A.A. degrees*

The athletic coaching minor is recommended for students who are interested in coaching in an athletic program sponsored by the Michigan High School Athletic Association or some other state athletic association.'

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. In order to graduate with this minor a student must:
  - a. Obtain a 2.5 overall GPA and a 2.75 GPA in the minor.
  - b. Have current CPR and First Aid Certification.
  - c. Maintain established standards of professional practice articulated in the CMU Athletic Coaching Internship Manual and reflected in the first four standards constituting Domain 1 – Philosophy and Ethics, in the National Standards for Sport Coaches.
2. At least 12 credit hours of coursework within the minor must be taken at CMU.

#### Required Courses (24 hours)

PES 125 - Principles and Foundations of Coaching 3(3-0)  
 PES 225 - Athletic Conditioning for Coaches 3(3-0)  
 PES 255 - Athletic Skills and Techniques 2(2-0)  
 PES 279 - Sport First Aid and Athletic Emergencies 3(3-0)  
 PES 311 - Psychology of Coaching 3(3-0)  
 PES 335 - Principles of Effective Coaching Instruction 3(3-0)  
 PES 410 - Competition Oriented Strategies and Preparations 2(2-0)  
 PES 445 - Athletic Season Planning and Evaluation 2(2-0)  
 PES 470 - Athletic Coaching Internship 3(Spec)

**Total: 24 semester hours**



## Department of Physical Therapy

(PTH)

For information, please contact  
the Physical Therapy Program, HPB 1220, 989-774-2347;  
<https://www.cmich.edu/academics/colleges/herbert-h-grace-a-dow-college-of-health-professions/degrees-programs/departments/departments-physical-therapy>

### Programs at CMU

For information, please contact the Physical Therapy Program, HPB 1232, 989-774-2347; <https://www.cmich.edu/colleges/CHP/programs/Pages/Pre-PT.aspx>

The Department of Physical Therapy offers a doctoral Program in Physical Therapy, which is a three-year professional program that awards a Doctor of Physical Therapy (DPT) degree.

See *Pre-professional Studies, Physical Therapy* in the Index for advising on courses and majors/minors to pursue if you are interested in Physical Therapy.

### The Faculty

John Andraka, Elaine Betts, Karen Grossnickle, Caroline Gwaltney, Jamie Haines, Linda Hall, Janice Perkins, Jennifer Sansom, Deborah Silkwood-Sherer, Paul Sung, Ksenia Ustinova, Kristin Vanderark, Cameron Williams, J. Timothy Zipple

## School of Rehabilitation and Medical Sciences

(ATR, FNS, NDS, NUR, PHA)

For information, please contact:

Athletic Training, HPB 1222, 989-774-1054;

Nursing Program, HPB 1222, 989-774-1054;

Nutrition and Dietetics, Wightman 205; 989-774-2613;

Physician Assistant Program, HPB 1222, 989-774-1730

<https://www.cmich.edu/academics/colleges/herbert-h-grace-a-dow-college-of-health-professions/degrees-programs/departments/school-rehabilitation-medical-sciences>

### Programs at CMU

The School of Rehabilitation and Medical Science includes undergraduate programs in Athletic Training, Foods and Nutrition, and RN-to-BSN (nursing) for current RNs. See also the Pre-Professional Studies section in the Undergraduate Bulletin for Pre-Physician Assistant programs or visit <https://www.cmich.edu/colleges/chp>.

Graduate programs are offered in Athletic Training, Physician Assistant Studies and Nutrition and Dietetics. The Physician Assistant Studies program is a 27-month program that offers a Master of Science degree. For a detailed description of admissions requirements, prerequisite coursework and the professional curriculum for graduate programs, please consult the *Graduate Studies Bulletin*.

### The Faculty

Domenico Ausiello, Robert Bell, Michael Fillenworth, Jeff Fisher, Katie Flannery, Elizabeth Frutiger, Ahmad Hakemi, Roschelle Heuberger, Chris Hamlyn, Leslie Hildebrandt, Kechinyere Iheduru-Anderson, Rawia Khasawneh, Yeonsoo Kim, Debra Kimball-Christie, Lixin Li, Blaine Long, Brittany Reiber, Dale Russell, Audrey Shaw, René R. Shingles, Basheer Sufyan, Marlene Van Dyke, Emily Webster, Najat Yahia, Erika Zambarano

### Athletic Training Major

*B.S.A.T degree*

The 3+2 B.S.A.T./M.S.A.T. program is designed for incoming freshmen and transfer students who are interested in completing a master's degree in athletic training in five instead of six years. In order to receive the B.S.A.T., students must complete the M.S.A.T. requirements. The goal of the undergraduate Athletic Training major is to prepare students to transition into the Commission on Accreditation of Athletic Training Education (CAATE) accredited graduate Athletic Training Program. Upon completion of the undergraduate major, graduate program; B.S.A.T. and M.S.A.T. graduation requirements, students will be eligible to apply for the Board of Certification, Inc. (BOC) national certification examination for athletic trainers. Additional information regarding the athletic training program can be viewed at the program's website.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students intending to pursue the 3+2 B.S.A.T./M.S.A.T. are encouraged to meet with an athletic training faculty advisor early in their academic career to assure they understand the requirements for the undergraduate major and admissions criteria for the graduate athletic training program.
2. To sign an Athletic Training Major, a student must be admitted into the M.S.A.T. See 3+2 B.S.A.T./M.S.A.T. Admissions Requirements.
3. A student must meet Technical Standards be considered for admission and therefore continue into the M.S.A.T. 3+2 B.S.A.T./M.S.A.T. (Currently enrolled CMU Undergraduate students only)

**3+2 B.S.A.T./M.S.A.T.:** Currently enrolled CMU Undergraduate Students only.

#### Admission Requirements

1. A completed program application in ATCAS (Athletic Training Centralized Application Service).

2. Two professional recommendations. One professional recommendation must be completed by an athletic trainer with whom clinical observation hours were obtained. The other professional recommendation must be completed by an instructor or professor.
3. An overall GPA of 2.7 or higher.
4. A prerequisite GPA of 2.7 or higher in identified courses (HSC 214, HSC 215, HSC 216, HSC 317, NDS 370, PSY 100).
5. Completion of additional prerequisite courses with no grade below a 2.0 (BIO 101, CHM 120,127 OR CHM 131, HSC 308, PHY 100 OR PHY 130, PSY 220, STA 282).
6. Complete a minimum of 60 hours of practical experience with an athletic trainer.
7. Admissions interview.
8. Healthcare provider CPR/AED and First Aid certification.

#### Retention Standards

1. Students must continue to meet program retention criteria and Technical Standards to maintain status in the M.S.A.T. Consequences for non-compliance have been determined and could include probation, suspension, or dismissal from the Athletic Training Program.
2. Maintain at least a 3.0 cumulative GPA in the M.S.A.T.
3. Maintain established professional standards and adhere to the AT Policies and Procedures Manual and the BOC, Inc. Standards of Professional Practice.

#### Core Requirements (23 hours)

ATR 150 - Introduction to Athletic Training 3(3-0)

ATR 250 - Surface Anatomy I 3(1-2)

ATR 251 - Surface Anatomy II 3(1-2)

ATR 300 - Therapeutic Intervention 3(3-0)

ATR 340 - Athletic Training Field Experience 2(Spec)

ATR 350 - Immediate Care 3(1-2)

ATR 400WI - Research Methods and Evidence Based Medicine 3(3-0)

NDS 375WI - Nutrition and Performance 3(3-0)

(continued)

**Core I Requirements (32 hours)**

These hours are double counted for B.S.A.T. and M.S.A.T.

ATR 500WI - Clinical Research I 3(3-0)  
 ATR 600 - Immersive Clinical Education I 4(Spec)  
 ATR 605 - Injury Prevention I 2(1-1)  
 ATR 610 - Clinical Education I 1(Spec)  
 ATR 620 - Clinical Education II 1(Spec)  
 ATR 680 - Assessment I 3(1-2)  
 ATR 681 - Therapeutic Modalities 3(2-1)  
 ATR 682 - Assessment II 3(1-2)  
 ATR 683 - Therapeutic Rehabilitation I 3(1-2)  
 ATR 684 - Assessment III 3(1-2)  
 ATR 685 - Therapeutic Rehabilitation II 3(2-1)  
 ATR 687 - Manual Therapy 3(1-2)

**Total: 55 semester hours**

## Nutrition and Dietetics

### Dietetics Major

*B.A.; B.S. degrees*

A Dietetics major prepares students to meet the educational knowledge and skills specified by the Academy of Nutrition and Dietetics (AND) as part of the requirements to become a Registered Dietitian Nutritionist (RDN). The complete set of requirements for the RDN include: completing the DPD, Dietetic Internship (DI), and a Master's degree. After completing the requirements, students may apply to the AND's Commission on Dietetic Registration (CDR) to take the dietetic registration examination and become RDN-eligible on the CDR Registry.

Students pursuing this major are encouraged to meet with a dietetics advisor to ensure they understand the educational pathway and to complete the program in a timely manner.

**Note:** Effective January 1, 2024, any person taking the registration examination for the RDN credential will need to have completed a Master's degree along with an accredited DPD.

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**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Students must have a minimum of 3.00 overall GPA in order to declare the dietetics major and enter the Pre-professional Phase. Students must achieve an overall minimum GPA of 3.00, which will include the DPD course work; the student cannot have a grade lower than a 2.0 (C) in any DPD course work in order to be considered for the Professional Phase.

Both GPAs must include courses completed at other institutions as well as those completed at CMU.

**Selection criteria include:**

1. Application;
2. Overall GPA;
3. DPD Course Work;
4. To graduate with dietetics as a major and to receive a verification statement from the dietetics program, students are not allowed to take any required dietetic courses as credit/no credit;
5. Professional recommendation;
6. Work, volunteer, and extra curricular experience;
7. Autobiographical statement.

**Professional Phase Requirements:**

1. Adherence to the Academy of Nutrition Dietetics Professional Code of Ethics.
  2. Maintenance of a 3.0 GPA overall and in DPD coursework.
- 

**Dietetics Core (40 hours)**

NDS 160 - Introduction to Food and Culinary Techniques 3(2-2)  
 NDS 271 - Food and Culture 3(3-0)  
 NDS 361 - Food Science 4(3-2)  
 NDS 364 - Food Safety, Sanitation, and Health 3(3-0)

NDS 367 - Institutional Food Production Laboratory 1(0-2)  
 NDS 370 - Nutrition 3(3-0)  
 NDS 374WI - Nutrition in the Life Cycle 3(3-0)  
 NDS 469 - Foodservice Systems Administration 3(3-0)  
 NDS 471 - Medical Nutrition Therapy I 3(3-0)  
 NDS 472 - Medical Nutrition Therapy II 3(3-0)  
 NDS 473 - Advanced Nutrition 4(4-0)  
 NDS 480 - Nutritional Education and Counseling 4(4-0)  
 NDS 481 - Community Nutrition: Field Work 3(Spec)

**Other Requirements I (5-8 hours)**

CHM 120 - Survey of Chemistry 4(4-0)  
 CHM 127 - Introductory Chemistry Laboratory 1(0-2)  
 CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)

**Note:** You must take both CHM 120 and 127 OR CHM 131 and 132.

**Other Requirements II (11 hours)**

BIO 208 - Microbiology 4(3-3)  
 CHM 342 - Survey of Organic Chemistry 4(3-3)  
 CHM 421 - Survey of Biochemistry 3(3-0)

**Notes:**

- A student opting to take CHM 345 and CHM 346 instead of CHM 342 must have the equivalent of CHM 132 as a prerequisite.
- A student with CHM 345 and CHM 346 may elect CHM 521 and CHM 522, instead of CHM 421.

**Other Requirements III (4-8 hours)**

Select one of the following options:

**Option 1 (4 hours)**

BIO 392 - Mammalian Physiology 4(3-3)

**Option 2 (8 hours)**

HSC 214 - Human Anatomy 4(3-3)  
 HSC 215 - Human Physiology 4(3-2)

**Other Requirements IV (3 hours)**

Select one of the following:

HSC 544 - Biostatistics 3(2-1)  
 STA 282QR - Introduction to Statistics 3(3-0)

**Total: 63-70 semester hours**

### Nutrition Minor

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

The Nutrition Minor serves undergraduate students who are interested in increasing their knowledge in nutrition. The program is an ideal components to majors related to nutrition such as Health and Fitness, Public Health, Sports Medicine, Child Development, and Psychology. The Nutrition Minor provides students with a foundation for understanding nutrition and its impact on health.

**Required Course (3 hours)**

NDS 370 - Nutrition 3(3-0)

**Electives (19-21 hours)**

Select from the following in consultation with an advisor:

HSC 503 - Health Implications of Obesity 3(3-0)  
 NDS 271 - Food and Culture 3(3-0)  
 NDS 371 - Nutrition and Women's Health 3(3-0)  
 NDS 373 - Nutrition for Healthy Living 3(3-0)  
 NDS 374WI - Nutrition in the Life Cycle 3(3-0)  
 NDS 375WI - Nutrition and Performance 3(3-0)  
 NDS 377 - Nutrition in Disabilities and Disease 3(3-0)  
 NDS 378 - Maternal and Infant Nutrition 3(3-0)  
 NDS 470 - Applied Nutrition 3(3-0)  
 NDS 475WI - Nutritional and Herbal Supplements 3(3-0)  
 NDS 477 - Assessing Nutritional Status 2(1-2)  
 NDS 490 - Independent Study in Foods and Nutrition 1-6(Spec)  
 NDS 575 - Geriatric Nutrition 3(3-0)  
 NDS 577 - Advanced Topics in Nutrition: Eating Disorders 3(3-0)

**Total: 22-24 semester hours**

## Nursing

### Nursing Major

*BSN degree (RN-to-BSN)*

The RN-to-BSN (post-licensure completion) program is offered through the School of Rehabilitation and Medical Sciences in The Herbert H. and Grace A. Dow College of Health Professions. **The major is designed for Registered Nurses (RNs) to obtain their Bachelor of Science in Nursing (BSN) Degree.** The major is to educate the nursing student in theory and application of nursing concepts beyond those learned in their previous coursework and their current work experiences. The degree and major are built on a solid base in liberal education for professional nursing practice and knowledge. The program focuses on nursing leadership, global and population health, systems thinking, and evidence-based practice.

For more information, contact the BSN Program Director.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To be considered for admission, a student must meet the following criteria:

- A completed program application.
- An active, unencumbered RN license. **Note:** Applicants without a registered nurse license may apply to the program, receive provisional admission and take up to 12 credits while preparing for the NCLEX-RN examination. Contact program director for additional information.
- An admission GPA of 2.5 or higher.

Once admitted into the program, students must:

- Earn a grade of C or higher in all NUR courses.
- Maintain an active, unencumbered RN license.

If a student does not continue to meet retention standards, s/he may be asked to withdraw from the program. The nursing faculty maintains the right to terminate a student from the program if s/he is not progressing satisfactorily.

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#### Required Courses (24 hours)

NUR 300WI - Introduction to Baccalaureate Nursing Practice 3(3-0)  
NUR 301 - Health Assessment 3(Spec)  
NUR 302 - Research and Evidence-Based Practice 3(3-0)  
NUR 390WI - Concepts of Culture and Diversity 3(3-0)  
NUR 400 - Concepts of Global and Population Health 4(4-0)  
NUR 401 - Nursing Leadership and Health Systems 4(4-0)  
NUR 499 - Capstone: Systems Thinking and Quality Improvement 4(Spec)

#### Electives (6 hours)

Select two of the following:

NUR 320 - Nursing Informatics 3(3-0)  
NUR 321 - Health Care Finance and Economics 3(3-0)  
NUR 322 - Introduction to Nursing Education 3(3-0)  
NUR 323 - Nursing Case Management and Care Coordination 3(3-0)

#### Total: 30 semester hours

**Note:** students are required to complete a 3-hour Quantitative Reasoning course. This can be transferred.



# » College of Liberal Arts and Social Sciences

**Richard Rothaus, Ph.D., Dean**  
**Marcy Taylor, Ph.D., Associate Dean**  
 106 Anspach; 989-774-3341  
<https://class.cmich.edu>

**Course Designators:** CGL, CRM, DBI, ELI, GAM, HUM, LAR, MST, NSC, OJB, SEP, SSC, TEL, WGS

## Mission

The College of Liberal Arts and Social Sciences is a community of individuals who share a dedication to the life of the mind. Its fundamental purpose is to invigorate the intellectual lives of its students, faculty, and staff, and to promote an intellectual orientation in the larger communities it serves. In this spirit, the College challenges everyone to confront new and disturbing ideas with open minds and to reexamine old ideas with fresh eyes. Within the university, the mission of this College is to pursue disciplined inquiry into ideas and values that grow out of human experience, as well as the forces that shape human behavior and interaction. Since these areas of study - together with the natural sciences and the fine arts - are fundamental to the liberal arts, the College plays a crucial role in liberal arts education. The College also teaches students to apply their knowledge to the resolution of human problems in the world at large, thereby preparing them for professions in which they will contribute to the well-being of others.

## Goals

In order to fulfill all of these purposes, the College shall:

- provide high quality academic programs that develop the understandings and skills necessary for living in a complex and changing world;
- immerse the academic community in a multicultural and international environment;
- support programs of research and creative endeavors that add to our understanding of the human situation;
- share knowledge and skills with the larger community through service;
- attract and develop a diverse community of faculty, staff, and students;
- provide quality graduate programs whose graduates make important contributions to the discipline and to society.

## The Role in Liberal Arts Education

In order that students may become more thoughtful citizens in our diverse society and more active participants in our changing and interdependent world, the College will help them to develop

- strong writing and speaking skills;
- abilities to think clearly and critically;
- abilities to use technology in support of life-long learning;
- familiarity with their intellectual and cultural heritages;
- an understanding of social, psychological, and political environments; and
- an appreciation of other peoples and cultures.

*A university is a place where "mind clashes with mind."*  
 -John Henry Newman

## Areas of Study

### Departmental

The six departments in the College offer a wide spectrum of degree programs at CMU. Most fields of study lead to a major or minor, many with emphases and concentrations. Undergraduate Certificates are also offered in some departments or are interdisciplinary:

- Department of English Language and Literature
- Department of History, World Languages, and Cultures
- Department of Military Science
- Department of Philosophy, Anthropology, and Religion
- School of Politics, Society, Justice, and Public Administration
- Department of Psychology

See the index of this Bulletin for more information on each of the above departments. The staff of the College of Liberal Arts and Social Sciences office can also help you locate the appropriate department and advisor (Anspach 106; 989-774-3341).

## Interdisciplinary Studies

Interdisciplinary studies include the Game Design Thinking Minor, the Museum Studies Minor, the Social Science Major, and the Women and Gender Studies minor.

In education, the Social Studies: Geography and Social Studies: Political Science majors for teaching secondary and Teaching English Learners minor.

Interdisciplinary concentrations in Neuroscience Major: Cellular and Molecular Neuroscience and Neuroscience Major: Clinical Health Neuroscience are available for students interested in a major related to Psychology.

Undergraduate Certificates are offered in African and African Diaspora Studies, Cultural Competency, East Asian Studies, Latin American and Latino Studies, and Native American and Indigenous Studies.

Courses offered under the designators HUM, LAR, and SSC are also interdisciplinary in character. See their descriptions in the Course Description section of the Bulletin.

## ***Programs for Education Degrees***

Majors with secondary certification include English, history, and social studies. Minors with secondary certification include English, history, and Teaching English Learners (interdisciplinary). Other teacher education certifications can be earned in elementary education, elementary special education, secondary education, and secondary special education. Each of these programs has specific major and minor requirements, some of which are found in the College of Liberal Arts and Social Sciences.

If you are interested in any of the programs leading to teacher certification, consult both the specific department of choice in the Bulletin and the sections on degree programs and teacher certification.

## ***Pre-Professional Studies***

Professional programs such as law require certain basic preparatory work for acceptance into law school. Students should select a program of study that is strong in oral and written expression and fosters critical thinking skills and a critical understanding of the human institutions and values with which the law deals. There is no specific pre-law major, but Central Michigan University's College of Liberal Arts and Social Sciences can provide much of the needed preparation for law school admissions.

## ***Graduate Programs***

Departments in the college offer graduate programs at the masters and/or doctoral level. The English Language and Literature Department offers an M.A. in English Language and Literature with a concentration in Creative Writing. History offers a traditional M.A. and a joint M.A. program offered in association with a partner institution abroad. A Masters of Public Administration is offered by the School of Politics, Society, Justice, and Public Service. The department also offers courses contributing to a concentration in public administration in the Master of Science in Administration. Psychology's graduate programs include two masters level programs, a specialist degree, and four doctoral programs. They are the Master of Science in General/Experimental Psychology, a Master of Arts in Industrial/Organizational Psychology, a Specialist in Psychological Services in School Psychology, and Ph.D. programs in Clinical Psychology, School Psychology, Industrial/Organizational Psychology, and Applied Experimental Psychology.

## ***Accelerated Degrees***

Master's degrees with accelerated programs for undergraduate students include the M.A. in History, English Language and Literatures (Creative Writing concentration), and Experimental Psychology for highly motivated students. Students in these programs accelerate their careers by undertaking graduate work toward the traditional Master's degree concurrently with undergraduate work, as specified in the program of study and approved by the department and the office of Graduate Studies.

## ***Student Organizations***

Nearly three dozen student organizations are affiliated with programs in the College of Liberal Arts and Social Sciences. Among those groups are honor societies in English, world languages, history, military science, and psychology.

Other groups open to interested students include a literary journal; French, German, Japanese, and Spanish culture clubs; a variety of groups affiliated with military science; a pre-law organization that assists students in preparing for the LSAT; history, political science, social work, sociology, and psychology interest groups. Organizations schedule speakers and workshops, host annual meetings and initiations, sponsor educational travel, and engage in social activities. Dues and membership requirements vary. Contact the particular department or the Dean's Office (Anspach 106) for a listing of organizations affiliated with the college. Additional information is also available on the college webpage at <https://www.cmich.edu/colleges/class>.

## English Language and Literature

### Course Designator: ENG

For information, please contact the chairperson, 989-774-3171, 215 Anspach Hall;  
<https://www.cmich.edu/academics/colleges/liberal-arts-social-sciences/departments/english-language-literature>

### Why Study English?

The study of English affords students the opportunity to master the crucial, interrelated skills of thinking, reading, and writing through immersion in the manifold products of language. Courses in linguistics and composition teach the skills necessary for the understanding and effective use of language. Courses in literature aid students in absorbing the full range of literary thought and art, thereby rendering them better able to understand themselves and their world. Courses in the art of teaching enable English majors or minors to transmit effectively the acquired legacy of their education to future generations.

### English Language and Literature at CMU

The English Department offers two basic programs: English language, literature, and writing and teaching English language for secondary education. Each program requires between 39 and 43 hours for a major and 24 to 28 hours for a minor, depending on the choice and emphasis.

Students who elect to major or minor in an English Language and Literature program should declare this intention before the end of their sophomore year. Junior transfer students should declare during their first semester on campus. The departmental office assigns advisors to aid students in their major/minor program planning and to declare majors and minors for graduation and teacher preparation.

### Notes:

The English Language and Literature Department cannot guarantee that every course will be offered as designated.

The department strongly recommends that students in the English Literatures, Language, & Writing major take a foreign language as a cognate.

### The Faculty

Anne Alton, Steven Bailey (Chair), Nicole Barco, Jeffrey Bean, Ari Berk, Carlin Borsheim-Black, Tracy Davis, JoEllen DeLucia, Darrin Doyle, Maureen Eke, Robert Fanning, Amy Carpenter Ford, Mark Freed, Desmond Harding, Cathy Hicks-Kennard, Melinda Kreth, Daniel Lawson, Kristen McDermott, Gretchen Papazian, Matt Roberson, Nate Smith, Joseph Sommers, William Spruiell, William Wandless, Jeffrey Weinstock

## Teaching Majors and Minors

### Teaching English Language Arts Grades 5-12 Major

*B.S. in Ed. degree, Standard Secondary Certificate*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. EDU 107 must be completed with a B or higher.
2. Students must adhere to the Teacher Candidate Dispositions set by the Educator Preparation Program.
3. A minimum cumulative average of a 2.8 is required for the student teaching clinical experience.
4. A minimum cumulative average of a 2.8 in the Teaching English Language Arts Grades 5-12 major is required for the pre-student teaching clinical experience in ENG 560.
5. A C+ or higher must be earned in the following courses: ENG 211WI, 311, 319, 372, 560.
6. Courses taken for credit toward a Teaching English Language Arts Grades 5-12 major may not be taken Credit/No Credit.
7. Up to three courses may be transferred for course credit on the Teaching English Language Arts Grades 5-12 major.
8. All required coursework for the Teaching English Language Arts Grades 5-12 major must be completed prior to student teaching.
9. Any repeated coursework for the Teaching English Language Arts Grades 5-12 major must be completed at CMU.
10. Independent study in English is restricted to six (6) hours for the Teaching English Language Arts Grades 5-12 major.

#### Required Courses I (6 hours)

- ENG 175 - The Nature of Language 3(3-0)  
 ENG 234WI - Introduction to Literary Analysis 3(3-0)

#### Required Courses II (3 hours)

- Select one of the following:  
 ENG 294WI - Introduction to Creative Writing 3(3-0)  
 ENG 510WI - Writing Center Practicum 1-3(Spec)

#### Required Courses III (6 hours)

- Select two from the following:  
 ENG 382 - Racism and Diversity in Children's and Young Adult Literature 3(3-0)  
 ENG 580 - Young Adult Literature 3(3-0)  
 ENG 583 - Texts for the Middle Grades 3(3-0)

#### Required Courses IV (6 hours)

- Select two from the following:  
 ENG 204/WGS 204/SOC 204 - LGBTQ Identities 3(3-0)  
 ENG 327/WGS 327 - Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 ENG 328 - Native American Literature and Film 3(3-0)  
 ENG 329 - African American Literature 3(3-0)  
 ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)  
 ENG 333 - Literatures of Non-Western Cultures 3-6(3-0)

#### Required Courses V (6 hours)

- Select two from the following:  
 ENG 336 - Texts in Contexts: reimagining Literary History 3-9(3-0)  
 ENG 337 - Literary Modes and Genres 3-6(3-0)  
 ENG 338 - Literature as Inquiry 3-6(3-0)

**Required Courses VI (16 hours)**

ENG 211WI - Introduction to English Education 3(3-0)  
 ENG 311 - Teaching Literature in Secondary Schools 3(3-0)  
 ENG 319 - Teaching Composition in Secondary Schools 3(3-0)  
 ENG 372 - Teaching Grammar in Secondary Schools 3(3-0)  
 ENG 560 - Clinical Practice in English Education 4(Spec)

**Total: 43 semester hours**

## Teaching English Language Arts Grades 5-9 Minor

*B.S. in Ed. degree, Standard Secondary Certification*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. EDU 107 must be completed with a B or higher.
2. Students must adhere to the Teacher Candidate Dispositions set by the Educator Preparation Program.
3. A minimum cumulative average of a 2.8 is required for the student teaching clinical experience.
4. A minimum cumulative average of a 2.8 in the Teaching English Language Arts Grades 5-9 Minor is required for the pre-student teaching clinical experience.
5. A C+ or higher must be earned in the following courses: ENG 211, 311, 319, 560.
6. Courses taken for credit toward a Teaching English Language Arts Grades 5-9 Minor may not be taken Credit/No Credit.
7. Up to two courses may be transferred for course credit on the Teaching English Language Arts Grades 5-9 Minor.
8. All required coursework for the Teaching English Language Arts Grades 5-9 Minor must be completed prior to student teaching.
9. Any repeated coursework for the Teaching English Language Arts Grades 5-9 Minor must be completed at CMU.
10. Independent study in English is restricted to six (6) hours for the Teaching English Language Arts Grades 5-9 Minor.

**Required Courses I (6 hours)**

ENG 175 - The Nature of Language 3(3-0)  
 ENG 234WI - Introduction to Literary Analysis 3(3-0)

**Required Courses II (3 hours)**

Select one of the following:  
 ENG 294WI - Introduction to Creative Writing 3(3-0)  
 ENG 510WI - Writing Center Practicum 1-3(Spec)

**Required Courses III (6 hours)**

Select two of the following:  
 ENG 382 - Racism and Diversity in Children's and Young Adult Literature 3(3-0)  
 ENG 580 - Young Adult Literature 3(3-0)  
 ENG 583 - Texts for the Middle Grades 3(3-0)

**Required Courses IV (3 hours)**

Select one of the following:  
 ENG 204/WGS 204/SOC 204 - LGBTQ Identities 3(3-0)  
 ENG 327/WGS 327 - Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 ENG 328 - Native American Literature and Film 3(3-0)  
 ENG 329 - African American Literature 3(3-0)  
 ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)  
 ENG 333 - Literatures of Non-Western Cultures 3-6(3-0)  
 ENG 336 - Texts in Contexts: Reimagining Literary History 3-9(3-0)  
 ENG 337 - Literary Modes and Genres 3-6(3-0)  
 ENG 338 - Literature as Inquiry 3-6(3-0)

**Required Courses V (13 hours)**

ENG 211WI - Introduction to English Education 3(3-0)  
 ENG 311 - Teaching Literature in Secondary Schools 3(3-0)  
 ENG 319 - Teaching Composition in Secondary Schools 3(3-0)  
 ENG 560 - Clinical Practice in English Education 4(Spec)

**Total: 31 semester hours**

## Teaching English Language Arts Grades 7-12 Minor

*B.S. in Ed. degree, Standard Secondary Certificate*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. EDU 107 must be completed with a B or higher.
2. Students must adhere to the Teacher Candidate Dispositions set by the Educator Preparation Program.
3. A minimum cumulative average of a 2.8 is required for the student teaching clinical experience.
4. A minimum cumulative average of a 2.8 in the Teaching English Language Arts Grades 7-12 Minor is required for the pre-student teaching clinical experience in ENG 560.
5. A C+ or higher must be earned in the following courses: ENG 211WI, ENG 311, ENG 319, ENG 560.
6. Courses taken for credit toward a Teaching English Language Arts Grades 7-12 Minor may not be taken Credit/No Credit.
7. Up to two courses may be transferred for course credit on the Teaching English Language Arts Grades 7-12 Minor.
8. All required coursework for the Teaching English Language Arts Grades 7-12 Minor must be completed prior to student teaching.
9. Any repeated coursework for the Teaching English Language Arts Grades 7-12 Minor must be completed at CMU.
10. Independent study in English is restricted to six (6) hours for the Teaching English Language Arts Grades 7-12 Minor.

**Required Courses I (6 hours)**

ENG 175 - The Nature of Language 3(3-0)  
 ENG 234WI - Introduction to Literary Analysis 3(3-0)

**Required Courses II (3 hours)**

Select one of the following:  
 ENG 294WI - Introduction to Creative Writing 3(3-0)  
 ENG 510WI - Writing Center Practicum 1-3(Spec)

**Required Courses III (3 hours)**

ENG 580 - Young Adult Literature 3(3-0)

**Required Courses IV (3 hours)**

Select one of the following:  
 ENG 204/WGS 204/SOC 204 - LGBTQ Identities 3(3-0)  
 ENG 327/WGS 327 - Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 ENG 328 - Native American Literature and Film 3(3-0)  
 ENG 329 - African American Literature 3(3-0)  
 ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)  
 ENG 333 - Literatures of Non-Western Cultures 3-6(3-0)

**Required Courses V (3 hours)**

Select one of the following:  
 ENG 336 - Texts in Contexts: Reimagining Literary History 3-9(3-0)  
 ENG 337 - Literary Modes and Genres 3-6(3-0)  
 ENG 338 - Literature as Inquiry 3-6(3-0)

**Required Courses VI (13 hours)**

ENG 211WI - Introduction to English Education 3(3-0)  
 ENG 311 - Teaching Literature in Secondary Schools 3(3-0)  
 ENG 319 - Teaching Composition in Secondary Schools 3(3-0)  
 ENG 560 - Clinical Practice in English Education 4(Spec)

**Total: 31 semester hours**

## Teaching English Learners Minor

*B.S.Ed. degrees*

This is an interdisciplinary minor. Please check the index for the page number.



## Major, Minor, and Certificate

### General statements that apply to English Majors and Minors

1. Independent study in English is restricted to nine (9) hours for the major and six (6) hours for the minor.
2. The department supports the concept of advanced placement as well as exemption from required courses and credit earned through approved university examination programs.
3. ENG 101, ELI 198, ELI 199, ENG 103/193 and ENG 201 do not apply on a major or minor.
4. Credit Restrictions: Courses taken for credit toward an English Major may not be taken Credit/No Credit.

### English Literatures, Language, and Writing Major

*B.A.; B.S. degrees*

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See the General statements that apply to English majors and minors at the beginning of this section.

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#### Required Courses I (9 hours)

ENG 234WI - Introduction to Literary Analysis 3(3-0)  
 ENG 334 - Literary and Cultural Theory 3(3-0)  
 ENG 435WI - Senior Seminar: Advanced Literary Analysis 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:  
 ENG 175 - The Nature of Language 3(3-0)  
 ENG 271 - Modern Grammar 3(3-0)  
 ENG 375 - Introduction to Linguistics 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:  
 ENG 294WI - Introduction to Creative Writing 3(3-0)  
 ENG 301WI - Nonfiction Writing 3(3-0)  
 ENG 303WI - Technical Writing 3(3-0)

#### Required Courses IV (12 hours)

##### IV.a. Historical Periods (9 hours)

Select 9 hours from the following:  
 ENG 335 - Topics in Ancient or Medieval Literature 3-6(3-0)  
 ENG 336 - Texts in Contexts: Reimagining Literary History 3-9(3-0)  
 ENG 337 - Literary Modes and Genres 3-6(3-0)  
 ENG 338 - Literature as Inquiry 3-6(3-0)

##### IV.b. Comparative Cultural and Literary Traditions (3 hours)

Select one of the following:  
 ENG 325 - Stories, Spells, and Songs: Folklore and Folklife 3(3-0)  
 ENG 327/WGS 327 - Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 ENG 328 - Native American Literature and Film 3(3-0)  
 ENG 329 - African American Literature 3(3-0)  
 ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)  
 ENG 333 - Literatures of Non-Western Cultures 3-6(3-0)  
 ENG 381WI - Children's Literature 3(3-0)

#### Electives (12 hours)

Select 12 hours of ENG courses, with at least 6 hours at the 400 or 500 level; no more than 3 hours of 100-level ENG courses may count toward electives.

#### OR

Students may specialize in a particular area by choosing one of the following specializations, with at least 6 hours at the 400 or 500 level.

#### Specialization 1: Creative Writing (12 hours)

Select ENG 294WI (required) plus 9 additional hours from the following:

ENG 294WI - Introduction to Creative Writing 3(3-0)  
 ENG 391WI - Creative Writing: Fiction 3(3-0)  
 ENG 392WI - Creative Writing: Poetry 3(3-0)  
 ENG 491WI - Advanced Fiction Writing 3-6(3-0)  
 ENG 492 - Advanced Poetry Writing 3-6(3-0)  
 ENG 493WI - Creative Nonfiction 3-6(3-0)

#### Specialization 2: Nonfiction Writing (12 hours)

Select 12 credit hours from:

ENG 301WI - Nonfiction Writing 3(3-0)  
 ENG 303WI - Technical Writing 3(3-0)  
 ENG 402WI - Argumentation and Expository Writing 3(3-0)  
 ENG 493WI - Creative Nonfiction 3-6(3-0)  
 ENG 503 - Document Design 3(3-0)  
 ENG 504 - Technical Editing 3(3-0)  
 ENG 514 - Language and Media Discourse 3(3-0)  
 ENG 539 - Seminar in Major Nonfiction Writers 3-9(Spec)

#### Specialization 3: World Literature (12 hours)

Select ENG 333 (required) plus 9 additional hours from the following:

ENG 325 - Stories, Spells, and Songs: Folklore and Folklife 3(3-0)  
 ENG 327/WGS 327 - Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 ENG 328 - Native American Literature and Film 3(3-0)  
 ENG 329 - African American Literature 3(3-0)  
 ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)  
 ENG 333 - Literatures of Non-Western Cultures 3-6(3-0)  
 ENG 335 - Topics in Ancient or Medieval Literature 3-6(3-0)  
 ENG 336 - Texts in Contexts: Reimagining Literary History 3-9(3-0)  
 ENG 337 - Literary Modes and Genres 3-6(3-0)  
 ENG 338 - Literature as Inquiry 3-6(3-0)  
 ENG 444 - In Her Own Words: Global Feminist Perspectives 3(3-0)  
 ENG 561 - European Romanticism 3(3-0)  
 ENG 566 - Human Rights in Literature, Art, and Film 3(3-0)  
 ENG 569 - Seminar in Major World Writers 3-9(3-0)

**Note:** ENG 335, 336, 337, and 338 with sections labeled "C" fulfill the World Literature specialization.

#### Specialization 4: Children's and Young Adult Literature (12 hours)

Select ENG 381WI (required) plus 9 additional hours from the following:

ENG 381WI - Children's Literature 3(3-0)  
 ENG 481 - International Literature for Children and Young Adults 3(3-0)  
 ENG 482 - Fantasy for Youth 3(3-0)  
 ENG 485 - Poetry for Children and Young Adults 3(3-0)  
 ENG 580 - Young Adult Literature 3(3-0)  
 ENG 581 - The History of Children's Literature in English 3(3-0)  
 ENG 582 - Cultural Pluralism in Young Adult and Children's Literature 3(3-0)  
 ENG 583 - Texts for the Middle Grades 3(3-0)

#### Specialization 5: American and British Literature (12 hours)

Select 12 hours from the following:

ENG 328 - Native American Literature and Film 3(3-0)  
 ENG 329 - African American Literature 3(3-0)  
 ENG 335 - Topics in Ancient or Medieval Literature 3-6(3-0)  
 ENG 336 - Texts in Contexts: Reimagining Literary History 3-9(3-0)  
 ENG 337 - Literary Modes and Genres 3-6(3-0)  
 ENG 338 - Literature as Inquiry 3-6(3-0)  
 ENG 349 - Shakespeare 3(3-0)  
 ENG 442 - The British Novel 3(3-0)  
 ENG 455 - The American Novel 3(3-0)  
 ENG 545 - Love, Plague, and Chivalry: Chaucer's Works and World 3(3-0)  
 ENG 547 - Seminar in Major British Writers 3-9(3-0)

ENG 549 - Advanced Shakespeare 3(3-0)  
 ENG 559 - Seminar in Major American Writers 3-9(Spec)  
 ENG 570 - Old English 3(3-0)

**Note:** ENG 335, 336, 337, and 338 with sections labeled A or B fulfill the American and British Literature specialization.

#### Specialization 6: Applied Linguistics (12 hours)

Select ENG 375 plus 9 additional hours from the following:

ENG 375 - Introduction to Linguistics 3(3-0)  
 ENG 510WI - Writing Center Practicum 1-3(Spec)  
 ENG 520 - Diachronic Linguistics and the History of English 3(3-0)  
 ENG 570 - Old English 3(3-0)  
 ENG 571 - Teaching of English to Speakers of Other Languages 3(3-0)  
 ENG 574 - TESOL Materials, Assessment, Curriculum 3(3-0)  
 ENG 577 - Introduction to Second Language Acquisition 3(3-0)  
 ENG 578 - Applied Sociolinguistics 3(3-0)

**Note:** Two years of foreign language or equivalent recommended.

**Total: 39 semester hours**

## English Minor

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

See the General statements that apply to English majors and minors at the beginning of this section.

#### Required Courses I (6 hours)

ENG 175 - The Nature of Language 3(3-0)  
 ENG 234WI - Introduction to Literary Analysis 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

ENG 294WI - Introduction to Creative Writing 3(3-0)  
 ENG 301WI - Nonfiction Writing 3(3-0)  
 ENG 303WI - Technical Writing 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:

ENG 325 - Stories, Spells, and Songs: Folklore and Folklife 3(3-0)  
 ENG 327/WGS 327 - Women Writers: Gender, Sexuality, and Literature 3(3-0)  
 ENG 328 - Native American Literature and Film 3(3-0)  
 ENG 329 - African American Literature 3(3-0)  
 ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)  
 ENG 333 - Literatures of Non-Western Cultures 3-6(3-0)  
 ENG 381WI - Children's Literature 3(3-0)

#### Required Courses IV (3 hours)

Select one of the following:

ENG 335 - Topics in Ancient or Medieval Literature 3-6(3-0)  
 ENG 336 - Texts in Contexts: Reimagining Literary History 3-9(3-0)  
 ENG 349 - Shakespeare 3(3-0)

#### Required Courses V (3 hours)

Select one of the following:

ENG 337 - Literary Modes and Genres 3-6(3-0)  
 ENG 338 - Literature as Inquiry 3-6(3-0)

#### Electives (6 hours)

Select six (6) hours of ENG courses, no more than 3 hours at the 100 level.

**Total: 24 semester hours**

## Creative Writing Minor

*B.A., B.A.A., B.F.A., B.S., B.S. in B.A.*

This 24-credit hour minor is designed for undergraduate students who desire to gain greater competency in the writing of poetry, fiction, and/or creative nonfiction, as well as screenwriting, scriptwriting, and playwriting. It also prepares students to study creative writing at the graduate level.

#### Required Courses I (6 hours)

ENG 234WI - Introduction to Literary Analysis 3(3-0)  
 ENG 294WI - Introduction to Creative Writing 3(3-0)

#### Required Courses II (9 hours)

Select from the following:

ENG 391WI - Creative Writing: Fiction 3(3-0)  
 ENG 392WI - Creative Writing: Poetry 3(3-0)  
 ENG 491WI - Advanced Fiction Writing 3-6(3-0)  
 ENG 492 - Advanced Poetry Writing 3-6(3-0)  
 ENG 493WI - Creative Nonfiction 3-6(3-0)  
 ENG 591 - Seminar: Writing Fiction 3-6(3-0)  
 ENG 592 - Seminar: Writing Poetry 3-6(3-0)

#### Unrestricted Electives (9 hours)

Hours authorized by the advisor and planned with the student and can include any ENG course.

Courses listed in Required Courses II may be applied as elective credits, if applicable.

Optional BCA or TAI courses:

BCA 506WI - Writing for the Small Screen 3(3-0)  
 BCA 508WI - Writing the Feature-Length Screenplay 3(3-0)  
 TAI 586WI - Playwriting 3(3-0)

**Total: 24 semester hours**

## Undergraduate Certificate in Creative Writing

#### Minimum Totals for Graduation: 15 hours

This 15-credit-hour certificate is designed for degree-seeking students of any major and non-degree-seeking students who desire to gain greater competency in the writing of poetry, fiction, and/or creative nonfiction. It also prepares students to study creative writing at the graduate level.

15 hours chosen from the following:

#### Required Courses I (6 hours)

ENG 234WI - Introduction to Literary Analysis 3(3-0)  
 ENG 294WI - Introduction to Creative Writing 3(3-0)

#### Required Courses II (3-6 hours)

Students may focus in poetry, prose, or both by selecting 3-6 hours from the following:

ENG 301WI - Nonfiction Writing 3(3-0)  
 ENG 391WI - Creative Writing: Fiction 3(3-0)  
 ENG 392WI - Creative Writing: Poetry 3(3-0)

#### Required Courses III (3-6 hours)

Students may focus in poetry, prose, or both by selecting 3-6 hours from the following:

ENG 491WI - Advanced Fiction Writing 3-6(3-0)  
 ENG 492 - Advanced Poetry Writing 3-6(3-0)  
 ENG 493WI - Creative Nonfiction 3-6(3-0)

**Note:** Take either ENG 491WI, 492, or 493; the selected course may be repeated up to 6 hours.

**Total: 15 semester hours**

**Note:** All creative writing courses have prerequisites.

## History, World Languages, and Cultures

**Course Designators: ARB, CHN, FLN, FRN, GER, GRK, HST, JPN, LAT, OJB, POR, RUS, SPN**

For information, please contact the chairperson, 989-774-3374, Powers Hall 106

### Why Study History, World Languages, and Cultures?

The study of history, world languages, and cultures (HWLC) is a critical part of a university education and an excellent preparation for a wide range of careers. HWLC courses provide an understanding of the political, cultural, social, and economic life of past and current civilizations, helping us understand the world in which we live. A major or minor in history or world languages provides a broad education that informs and shapes the thinking of the entire person. HWLC minors, in particular, offer an excellent balance to specialized vocational and pre-professional studies. A HWLC major or minor also provides direct preparation for graduate study leading to an M.A. or Ph.D. degree and to careers in areas such as teaching; research; interpreting; translating; museum, library, or archival work; management; government; travel, tourism, and hospitality; and the law. Particularly in conjunction with coursework in business, economics, sociology, political science, and mathematics, such knowledge and skills are also excellent undergraduate preparation for graduate work in management, business administration, or journalism.

### History, World Languages, and Cultures at CMU

The Department of History, World Languages, and Cultures offers a variety of courses that introduce students to the multifaceted discipline of history as well as to American, African, Asian, European, Latin American, Mediterranean, and Middle Eastern languages and civilizations. HWLC majors and minors can be taken on a variety of teaching and non-teaching degrees. The department participates in an interdisciplinary major in social sciences and social studies, and in minors in military science and women's studies. Additionally, the department offers a Master of Arts in History, with an option to enroll in an accelerated program beginning in the junior year of undergraduate study. World language students with no previous language experience in French, German, or Spanish should begin with a language course numbered 101. Students with previous language experience must take the placement exam. In each language the course sequence is 101, 102, 201, 202. If you have any questions regarding your placement, contact the department to get connected with a HWLC language advisor.

### Study Abroad

Students can register at CMU to study abroad at the following institutions:

- French in Aix-en-Provence, France at the Institut Américain Universitaire (IAU); in Pau, France with the University Studies Abroad Consortium (USAC); in Chicoutimi, Québec at the Université du Québec à Chicoutimi.
- German in Lüneburg, Germany with the University Studies Abroad Consortium (USAC); in Berlin, Germany with FUBest; in Bochum, Germany at Ruhr-Universität; in Heidelberg, Germany at the CEPA. In addition, three year-long exchange scholarships for study in Germany are available to eligible German majors.
- History at the University of Groningen in the Netherlands; at Ruhr-Universität in Bochum, Germany; and other exchange institutions. Three substantial scholarships are also available for history majors studying abroad for a semester or more.
- Japanese in Hikone at the Japan Center for Michigan Universities, and in Nara at Nara University of Education.
- Spanish in Buenos Aires, Argentina at the ISA Universidad del Salvador, or API Universidad Torcuato di Tella; in Valparaíso, Chile at the Pontificia Universidad Católica; in Heredia, Costa Rica at the Universidad Nacional de Costa Rica; in La Habana, Cuba at the API Universidad de la Habana; in Santiago, Dominican Republic at the ISA Pontificia Universidad Católica; in Quito, Ecuador at the Universidad de San Francisco de Quito; in Querétaro, México at the ITESM Tecnológico de Monterrey; in Pamplona, Spain at the Universidad de Navarra.
- Arabic, Chinese, and Portuguese: Study abroad opportunities are also available for those studying Arabic, Chinese, or Portuguese.

Credit for courses abroad is arranged in consultation with advisors from the World Languages and Cultures faculty and the director of the Office of Global Engagement. Guaranteed student loans, Pell grants and other financial aid plans are available for programs abroad.

### The Faculty

Maiko Bronson, N. Christine Brookes, Michelle Cassidy, María Chouza-Calo, Jennifer Demas, Lane Demas, Kathleen Donohue, Leila Ennaïli, Carrie Euler, Brittany Fremion, Solomon Addis Getahun, Carolina Gutiérrez-Rivas, Mitchell K. Hall, Doina Harsanyi, Luz Marcela Hurtado, Krzysztof Kulawik, Jay Martin, Tara McCarthy, Roberto Mendoza-Farías, Timothy O'Neil, Jennifer Quick, Amy Ransom, Alejandra Rengifo, Daniela Richter, Gregory Smith, Jonathan Truitt, Andrew Wehrman

## History

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students planning or considering a major or minor in history are urged to consult with an advisor as early as possible in their college careers. Students may select any history faculty member to serve as advisor.
2. Six (6) hours of Credit/No Credit in history courses will be accepted in the major or minor, but these hours may not be in 400 level or 500 level courses.
3. Survey or introductory courses (when transferred from another college or university) are accepted for no more than 3 hours per course on the major or minor.
4. History majors, particularly those planning to do graduate work in history, are strongly urged to include two years of foreign language study in their undergraduate programs.
5. History majors and minors planning to do graduate work in history are strongly urged to take both the general aptitude and advanced history tests of the Graduate Record Examination early in their senior year. These examinations are generally required for admission to graduate schools.
6. Credit Limitation. Courses in the department that are subject to graduate credit limitation under the policy covering unspecified content or variable credit include HST 532, 590, 595, 597, 601, 690, and 791.
7. The department does not accept the CLEP examination for credit toward a major or minor.
8. Up to 6 hours of credit for AP examinations will be approved as follows: three credits for a score of four for History (American) in HST 111 or History (European) in HST 102; or 6 credits for a score of five for History (American) in HST 111 and HST 112 or History (European) in HST 101 and HST 102.
9. The department strongly urges all history majors and minors to study abroad, particularly those planning to teach history or to go on to graduate study. Students are encouraged to meet with a department study abroad faculty advisor or an Office of Study Abroad advisor as early as possible.

### ACCELERATED MASTER OF ARTS IN HISTORY

*(Currently enrolled CMU Undergraduate students only)*

The Accelerated M.A. degree allows highly motivated students to accelerate their academic careers by undertaking graduate work toward the traditional Master of Arts degree (not the Joint M.A. in History) concurrently with undergraduate work. This is not for students seeking teaching certification as part of their undergraduate degree work.

#### Admission Standards:

1. Written recommendation of a CMU history professor.
2. Six (6) hours of history coursework completed with at least a 3.25 GPA in those courses and a 3.25 overall GPA.

#### Retention Standards:

1. Candidates for the Accelerated Masters Degree Program must meet with the History Graduate Director and complete the Acknowledgement and Approval Form.
2. Candidates must earn at least a "B" grade in each of the courses listed on the Approval Form.
3. Students who earn less than a "B" grade in any of their AMDP courses will be notified by office of Graduate Studies of their removal from the program.

#### Degree Requirements

The degree requirements for the Accelerated M.A. combine the non-teaching major and the traditional M.A. as follows:

1. The student must meet with an advisor in the department and submit an Accelerated M.A. Program Plan to the department by the beginning of the second semester of his or her second year of study for the B.A. An accelerated Masters Program Approval Form must also be submitted to the office of Graduate Studies, along with an application for admission to Graduate Studies.
2. HST 496WI must be taken in the junior (third) year.

3. In the student's junior undergraduate year, he or she must apply to CMU Graduate Studies for accelerated admission in the senior year and be admitted to accelerated graduate status.
4. Three to twelve (3-12) hours of M.A. graduate credit, including one graduate seminar or colloquium, may be taken once the student has achieved senior status (86 credit hours).
5. The accelerated plan is intended to encourage research and writing competency in a particular research field; therefore, the candidate is encouraged to elect Plan A, the Thesis Option of the M.A. program.
6. It is highly recommended that the student undertake a one-semester study abroad in history, preferably in the third year of the B.A. work. This can be arranged through the department.

## History Major

*Non-Teaching; B.A., B.S. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See information at the beginning of this section.

#### Required Courses I (4 hours)

HST 301 - The Craft of History 4(4-0)

#### Required Courses II (3 hours)

HST 496WI - Research Seminar 3(3-0)

**Note:** HST 496WI or a substitute approved by an advisor.

#### Required Courses III (3 hours)

##### *U.S. History*

Select one of the following:

- HST 110 - The American Experience 3(3-0)
- HST 111 - The Quest for Liberty: The United States to 1865 3(3-0)
- HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)
- HST 221 - Growing Up in America 3(3-0)
- HST 222WI - Cherokees, Slaves and the Struggle for Racial Justice 3(3-0)
- HST 226/WGS 226 - From Witch Trials to Women's Liberation: Women in America 3(3-0)
- HST 228 - American Business: A History 3(3-0)
- HST 302 - Comparative Environmental History 3(3-0)
- HST 303 - The American Revolution 3(3-0)
- HST 312 - American Military Experience 3(3-0)
- HST 315 - The Vietnam War 3(3-0)
- HST 319 - The United States since World War II 3(3-0)
- HST 320 - United States Social History to 1865 3(3-0)
- HST 321 - United States Social History since 1865 3(3-0)
- HST 322 - Westward Movement in America 3(3-0)
- HST 323 - History of Native Americans 3(3-0)
- HST 324 - "Death is Better than Slavery": African American History to 1877 3(3-0)
- HST 325 - "By Any Means Necessary": African American History, 1877-Present 3(3-0)
- HST 328 - Technology in American History 3(3-0)
- HST 329 - Film and the Politics of Gender, 1960-Present 3(3-0)
- HST 330 - "We the People": U.S. Constitutional History 3(3-0)
- HST 333 - History of Michigan 3(3-0)
- HST 335 - History of the Rock and Roll Era 3(3-0)
- HST 511 - Colonial British America 3(3-0)
- HST 513 - Era of the Early Republic, 1789-1825 3(3-0)
- HST 515 - Civil War and Reconstruction 3(3-0)
- HST 516 - Emergence of Modern America, 1877-1920 3(3-0)
- HST 522 - Indians of the Great Lakes Region 3(3-0)
- HST 524 - American Diplomatic History Since 1898 3(3-0)
- HST 526 - Modern American Political Culture, 1865-Present 3(3-0)
- HST 532 - Michigan History Studies 1-3(Spec)

#### Required Courses IV (3 hours)

##### *Modern European History*

Select one of the following:

- HST 102 - The Development of Western Civilization: From 1700 to the Present 3(3-0)

(continued)



HST 106 - Twentieth Century: Western World Issues 3(3-0)  
 HST 254/WGS 254 - Women in European History 3(3-0)  
 HST 280 - Nazi Germany and the Holocaust 3(3-0)  
 HST 343 - History of Paris 3(3-0)  
 HST 344 - Modern Europe, 1815-1918 3(3-0)  
 HST 347 - The French Revolution and Napoleonic Period 3(3-0)  
 HST 349 - Russia in the Nineteenth and Twentieth Centuries 3(3-0)  
 HST 353 - Germany since 1870 3(3-0)  
 HST 356 - Europe Since 1945 3(3-0)  
 HST 542 - The Enlightenment in Europe 3(3-0)  
 HST 543 - Napoleon 3(3-0)  
 HST 558 - Europe, 1914-1945 3(3-0)

**Required Courses V (3 hours)***Non-Western History*

Select one of the following:

HST 163 - The Latin American Experience 3(3-0)  
 HST 168 - Modern East Asia 3(3-0)  
 HST 176 - The African Experience 3(3-0)  
 HST 236 - Babylon and Beyond: Ancient Civilizations of the Near/Middle East 3(3-0)  
 HST 237 - Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)  
 HST 261 - Indigenous Peoples of Latin America: Precontact to 1821 3(3-0)  
 HST 336 - Iran and Iraq in History 3(3-0)  
 HST 361/REL 361 - Sinners and Saints of Colonial Latin America 3(3-0)  
 HST 362WI - Revolutions in Latin America 3(3-0)  
 HST 369 - Traditional China 3(3-0)  
 HST 370 - Modern China 3(3-0)  
 HST 375 - Continuity and Change in Contemporary Africa, 1960s to the Present 3(3-0)  
 HST 376 - East/Central Africa: Issues 3(3-0)  
 HST 377 - West Africa 3(3-0)  
 HST 378 - South Africa 3(3-0)  
 HST 379/HUM 340 - Race, Class and Power: South Africa in the 20th Century 3(3-0)  
 HST 382/REL 382 - History of Israel 3(3-0)  
 HST 560 - Mind Games 3(3-0)  
 HST 576 - Colonialism in Africa, 1880s-1960s 3(3-0)

**Note:** HST 236, 237, and 369 may fill requirements for either Required Courses V or Required Courses VI, but cannot fill requirements for both categories.

**Required Courses VI (3 hours)***Pre-Modern History*

Select one of the following:

HST 101 - The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)  
 HST 200 - Medieval Civilization 3(3-0)  
 HST 201 - World History to 1500 3(3-0)  
 HST 236 - Babylon and Beyond: Ancient Civilizations of the Near/Middle East 3(3-0)  
 HST 237 - Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)  
 HST 238 - Ancient Greece and Rome 3(3-0)  
 HST 336 - Iran and Iraq in History 3(3-0)  
 HST 338 - The Decline and Fall of the Roman Empire 3(3-0)  
 HST 341 - Renaissance and Reformation 3(3-0)  
 HST 342 - The Culture of Renaissance Italy (Study Abroad) 3(Spec)  
 HST 346 - The World of Versailles: Power and the Politics of Splendor in 17th-Century France 3(3-0)  
 HST 348 - Russia through the Reign of Catherine the Great 3(3-0)  
 HST 350 - English History to 1688: From Stonehenge to the Glorious 3(3-0)  
 HST 369 - Traditional China 3(3-0)  
 HST 505 - Tudor England 3(3-0)  
 HST 537 - The Age of Cicero 3(3-0)  
 HST 538 - Athens: Classical Period 3(3-0)

**Note:** HST 236, 237, AND 369 count for either non-Western or pre-Modern. No course, however, can fill requirements in more than one area.

**Required Courses VII (6 hours)**

Six (6) additional hours of history courses numbered 100-599.

**Electives I (6 hours)**

Two additional courses at 300-500 level.

**Electives II (3 hours)**

One additional course at 500 level - HST 590 cannot be used for this requirement.

**Total: 34 semester hours**

**Public History Major**

*B.A. and B.S. degrees*

**Advisor: Jay Martin**

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

See information at the beginning of this section.

**Core Courses I (3 hours)**

Select one of the following:

PSC 100 - Introduction to Political Science 3(3-0)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)

**Core Courses II (22-25 hours)**

ANT 175 - Archaeology of the Americas 3(3-0)  
 HST 301 - The Craft of History 4(4-0)  
 HST 580 - Public History 3(3-0)  
 HST 583 - Archival Administration 3(3-0)  
 HST 595 - Internship in Public History 1-6(Spec)  
 MST 310 - Introduction to Museums 3(3-0)  
 PAD 210 - Introduction to Public Administration 3(3-0)

**Note:** Must take at least 3 hours of HST 595.

**Core Courses III (3 hours)**

Select one of the following:

HST 111 - The Quest for Liberty: The United States 1865 3(3-0)  
 HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)

**Electives I (3 hours)**

Select one of the following:

ANT 320 - North American Indian Cultures 3(3-0)  
 ANT 344 - Michigan Archaeology 3(3-0)  
 ANT 426 - Archaeological Theory 3(3-0)  
 ANT 500 - Field School in Archaeology 3-6(Spec)  
 ANT 540/CRM 540 - Archaeological Field and Laboratory Methods 1-4(Spec)  
 HST 585 - Oral History 3(3-0)  
 RPL 470 - Park and Natural Resource Management 3(3-0)  
 RPL 521 - Fund Development & Grant Writing for Public & Non-profit Organizations 3(3-0)  
 RPL 552 - Environmental Interpretation 3(3-0)

**Electives II (9-12 hours)**

Three (3) hours of U.S. History at the 300 level or above

Six to nine (6-9) hours of HST 100-599

**Total: 40-46 hours**

**History Minor**

*Non-Teaching; B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

See information at the beginning of this section.

**Required Courses (9 hours)**

Nine (9) hours at the 300 level or above.

**Electives (11-12 hours)**

Eleven (11) or more additional hours in history.

**Total: 20-21 semester hours**

## History Major

*Teaching Secondary; B.S. in Ed. degree, Standard Secondary Certificate*

For majors who wish to teach on the secondary level:

1. A student must have completed at least 30 hours of his or her History major, including HST 300 and HST 400. To be exempt from HST 300, a student must have advisor approval.
2. Transfer credit will be accepted from regionally accredited institutions, but at least 6 of the hours must be CMU classes. At least 12 of the required credit hours must have been received within ten years of application for student teaching.
3. Both majors and minors must complete a department student teaching evaluation form. In addition, students must furnish transcripts showing all history course credits.
4. Students are urged to take HST 400 the semester before student teaching. Students are also urged to have taken as preparation for HST 400 at least 5 hours of secondary education course work, including a course in psychological foundations of education.
5. Students must receive CR for HST 300 or a grade of C+ or higher in HST 400.
6. The department recommends that students planning to teach history in secondary schools major in history.
7. A minimum of a 3.0 GPA is required in history major courses to enroll in HST 400 and to be approved for student teaching.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See information at the beginning of this section.

### Core Courses (22 hours)

HST 111 - The Quest for Liberty: The United States to 1865 3(3-0)  
 HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)  
 HST 201 - World History to 1500 3(3-0)  
 HST 202 - World History since 1400 3(3-0)  
 HST 301 - The Craft of History 4(4-0)  
 HST 302 - Comparative Environmental History 3(3-0)  
 HST 496WI - Research Seminar 3(3-0)

**Note:** Another seminar may be substituted for HST 496WI, but must be approved by advisor.

### Methods Courses (5 hours)

HST 300 - A Mid-tier Experience for History Majors: Teaching History in Secondary 2(1-2)  
 HST 400 - Teaching History in Secondary Schools 3(3-0)

### Restricted Electives (12 hours)

- Select one HST course at the 100-599 level.
- Select one HST course at the 300-599 level.
- Select one HST course at the 500-599 level.

**Note:** One of the Restricted Electives must be in non-western history, and one additional course must be outside of the United States. HST 590 cannot be used for this requirement.

- Select one from the following:

HST 226/WGS 226 - From Trials to Women's Liberation: Women in America 3(3-0)  
 HST 320 - United States Social History to 1865 3(3-0)  
 HST 321 - United States Social History since 1865 3(3-0)  
 HST 323 - History of Native Americans 3(3-0)  
 HST 324 - "Death is Better than Slavery": African American History to 1877 3(3-0)  
 HST 325 - "By Any Means Necessary": African American History, 1877-Present 3(3-0)

**Total: 39 semester hours**

## History Minor

*Teaching Secondary; B.S. in Ed. degree, Standard Secondary Certificate*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See information at the beginning of this section.

For minors who wish to teach on the secondary level:

1. A student must have completed at least 20 hours of his or her History minor, including HST 300 and HST 400.
2. Both majors and minors must complete a department student teaching evaluation form. In addition, students must furnish transcripts showing all history course credits.
3. Students are urged to take HST 400 the semester before student teaching. Students are also urged to have taken as preparation for HST 400 at least 5 hours of secondary education course work, including a course in psychological foundations of education.
4. Students must receive CR for HST 300 or a grade of C+ or higher in HST 400.
5. The department recommends that students planning to teach history in secondary schools major in history.
6. A minimum of a 3.0 GPA is required overall and in history courses to enroll in HST 400 and to be approved for student teaching.

### Core Courses (19 hours)

HST 111 - The Quest for Liberty: The United States to 1865 3(3-0)  
 HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)  
 HST 201 - World History to 1500 3(3-0)  
 HST 202 - World History since 1400 3(3-0)  
 HST 301 - The Craft of History 4(4-0)  
 HST 302 - Comparative Environmental History 3(3-0)

### Restricted Electives (3 hours)

Select one of the following:

HST 226/WGS 226 - From Trials to Women's Liberation: Women in America 3(3-0)  
 HST 320 - United States Social History to 1865 3(3-0)  
 HST 321 - United States Social History since 1865 3(3-0)  
 HST 323 - History of Native Americans 3(3-0)  
 HST 324 - "Death is Better than Slavery": African American History to 1877 3(3-0)  
 HST 325 - "By Any Means Necessary": African American History, 1877-Present 3(3-0)

### Method Courses (5 hours)

HST 300 - A Mid-tier Experience for History Majors: Teaching History in Secondary 2(1-2)  
 HST 400 - Teaching History in Secondary Schools 3(3-0)

**Total: 27 semester hours**

## World Languages and Cultures

### French Language

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

The sequence 101-102-201-202 provides the basis for advanced study in all language majors and minors. Without previous language experience, prospective majors and minors begin with 101. Students who have previously studied a language must take the Language Placement Test, available here: <https://www.cmich.edu/colleges/class/WLC/StudentResources/PlacementTests>.

They should enroll in the course indicated by their placement score, and may be eligible for Retroactive Credit (see below). AP, CLEP, International Baccalaureate, and the Michigan Seal of Biliteracy are also accepted; see level equivalencies in Options for Earning Credit in this Bulletin (see the index for page number). For questions about placement, please contact the department.

**Retroactive Credit:** Students who take the placement exam and complete their first language course at the 102 level or higher with a grade of B (3.0) or better are eligible for up to 8 hours of retroactive credit. To qualify, this must be the student's first college-level course in this language. Earned credits count toward the University Program Subgroup IV-B. Retroactive credits do not count toward the University Program, but they do count toward the degree and toward some language majors and minors as indicated below for each program.

#### Notes:

One course at the 300 level or 400 level taken on a CR/NC basis may be counted toward a major or minor.

Transfer Students **majoring** in French must earn at least 9 credit hours in their major at CMU. These hours must be taken on campus.

Transfer Students **minoring** in French must earn at least 6 credit hours in their minor at CMU.

### French Major

*B.A.; B.S. degrees*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information at the beginning of the French section.

#### Core Courses (3-8 hours)

FRN 201 - Intermediate French I 4(4-0)

FRN 202 - Intermediate French II 4(4-0)

**Note:** Retroactive credits may count toward the French Major. This requirement may be fulfilled with equivalent 3-credit or 4-credit transfer courses. Students may place out of one of these courses with special instructor permission.

#### Required Courses I (18 hours)

Select six courses from:

FRN 125 - France's Gastronomies 3(3-0)

FRN 315 - Conversation and Composition I 3(3-0)

FRN 316 - Conversation and Composition II 3(3-0)

FRN 320 - French Civilization 3(3-0)

FRN 321WI - France Today 3(3-0)

FRN 325 - French Literature in Translation 3(3-0)

FRN 330 - Survey of French Literature (Beginning to 1800) 3(3-0)

FRN 331 - Survey of French Literature (1800 to Present) 3(3-0)

FRN 333 - Francophone Literature and Culture 3(3-0)

FRN 335 - French for the Professions 3(3-0)

FRN 340 - Foreigners in France in the 20th and 21st Centuries 3(3-0)

FRN 350 - Topics in French and Francophone Film 3-6(3-0)

FRN 353 - Youth Literature in French 3(3-0)

FRN 360 - Literature and Culture of Quebec 3(3-0)

FRN 370 - French Pronunciation and Diction 3(3-0)

FRN 375 - French/English Translation 3(3-0)

FRN 391 - Topics in French and Francophone Cultures 1-12(Spec)

FRN 423WI - France at War in the 20th Century 3(3-0)

FRN 460 - Topics in Quebec Studies 3(3-0)

FRN 531 - Practicum in French Stylistics 3(3-0)

FRN 591 - Advanced Topics in French and Francophone Cultures 1-6(Spec)

#### Required Courses II (3-6 hours)

Select one of the following for a minimum of 3 hours:

FRN 310 - Study Abroad 1-18(Spec)

FRN 410 - Study Abroad 1-12(Spec)

**Note:** Students unable to study abroad may substitute two (2) 3-credit French courses at the 300 level or above, with the approval of a French faculty advisor.

#### Electives (6 hours)

Select electives in French at 300 level or above.

**Total: 30-38 semester hours**

### French Minor

*B.A.; B.S. degrees*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information at the beginning of the French section.

#### Core Courses (3-8 hours)

FRN 201 - Intermediate French I 4(4-0)

FRN 202 - Intermediate French II 4(4-0)

**Note:** Retroactive credits may count toward the French Minor. This requirement may be fulfilled with equivalent 3-credit or 4-credit transfer courses. Students may place out of one of these courses with special instructor permission; in such cases, students will take additional electives to reach a minimum of 20 credits in French to fulfill the minor.

#### Required Courses I (9 hours)

Select three courses from:

FRN 125 - France's Gastronomies 3(3-0)

FRN 315 - Conversation and Composition I 3(3-0)

FRN 316 - Conversation and Composition II 3(3-0)

FRN 320 - French Civilization 3(3-0)

FRN 321WI - France Today 3(3-0)

FRN 325 - French Literature in Translation 3(3-0)

FRN 330 - Survey of French Literature (Beginning to 1800) 3(3-0)

FRN 331 - Survey of French Literature (1800 to Present) 3(3-0)

FRN 333 - Francophone Literature and Culture 3(3-0)

FRN 335 - French for the Professions 3(3-0)

FRN 340 - Foreigners in France in the 20th and 21st Centuries 3(3-0)

FRN 350 - Topics in French and Francophone Film 3-6(3-0)

FRN 353 - Youth Literature in French 3(3-0)

FRN 360 - Literature and Culture of Quebec 3(3-0)

FRN 370 - French Pronunciation and Diction 3(3-0)

FRN 375 - French/English Translation 3(3-0)

FRN 391 - Topics in French and Francophone Cultures 1-12(Spec)

FRN 423WI - France at War in the 20th Century 3(3-0)

FRN 460 - Topics in Quebec Studies 3(3-0)

FRN 531 - Practicum in French Stylistics 3(3-0)

FRN 591 - Advanced Topics in French and Francophone Cultures 1-6(Spec)

#### Required Courses II (3-6 hours)

Select one from the following for a minimum of 3 hours:

FRN 310 - Study Abroad 1-18(Spec)

FRN 410 - Study Abroad 1-12(Spec)

**Note:** Students unable to study abroad may substitute two (2) 3-credit FRN courses at the 300 level or above, with the approval of a French faculty advisor.

#### Electives (3-5 hours)

Select electives in FRN at 300 level or above.

**Total: 20-26 semester hours**

## German Language

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

The sequence 101-102-201-202 provides the basis for advanced study in all language majors and minors. Without previous language experience, prospective majors and minors begin with 101. Students who have previously studied a language must take the Language Placement Test, available here: <https://www.cmich.edu/colleges/class/WLC/StudentResources/PlacementTests>. They should enroll in the course indicated by their placement score, and may be eligible for Retroactive Credit (see below). AP, CLEP, International Baccalaureate, and the Michigan Seal of Biliteracy are also accepted; see level equivalencies in Options for Earning Credit in this Bulletin (see the index for page number). For questions about placement, please contact the department.

### Retroactive Credit

Students who take the placement exam and complete their first language course at the 102 level or higher with a grade of B (3.0) or better are eligible for up to 8 hours of retroactive credit. To qualify, this must be the student's first college-level course in this language. Earned credits count toward the University Program Subgroup IV-B. Retroactive credits do not count toward the University Program, but they do count toward the degree and toward some language majors and minors as indicated below for each program.

### Notes:

- All German majors are required to take 9 hours of language at the 300 level or above on campus.
- One course at the 300 level or 400 level taken on a CR/NC basis may be counted toward a major or minor.

## German Major

*B.A.; B.S. degree*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See information at the beginning of the German section.

### Core Courses (14 hours)

GER 201 - Intermediate German I 4(4-0)  
 GER 202 - Intermediate German II 4(4-0)  
 GER 311 - Advanced German I 3(3-0)  
 GER 312 - Advanced German II 3(3-0)

**Note:** Retroactive credits at the 200 level or above count toward the German Major. Students may transfer in equivalent 3-credit courses from another institution.

### Required Courses I (9 hours)

Select courses in German culture and/or literature from:

GER 325 - Modern German Literature in Translation 3(3-0)  
 GER 335 - The Culture of the German Economy 3(3-0)  
 GER 336 - The Culture of German Business 3(3-0)  
 GER 341 - German Cultural History I 3(3-0)  
 GER 342 - German Cultural History II 3(3-0)  
 GER 343 - Survey of German Literature I 3(3-0)  
 GER 344 - Survey of German Literature II 3(3-0)  
 GER 345 - Survey of German Literature III 3(3-0)  
 GER 347 - German Cultural History III 3(3-0)  
 GER 350 - Highlights of German Film 3(3-0)  
 GER 370 - Advanced Studies in German 1-12(Spec)  
 GER 403 - German Literature to 1776 3(3-0)  
 GER 405 - German Classicism 3(3-0)  
 GER 407 - German Literature of the Nineteenth Century 3(3-0)  
 GER 409 - German Literature of the Twentieth Century 3(3-0)  
 GER 470 - Advanced Studies in German 1-12(Spec)

**Note:** GER 370 and 470 can be taken more than once with permission of the advisor.

### Required Courses II (3-6 hours)

Select one of the following for a minimum of 3 hours:

GER 310 - German Language Study Abroad 1-12(Spec)  
 GER 410 - Study Abroad 1-24(Spec)

**Note:** Students unable to study abroad must take an additional 6 hours of coursework on campus at the 300 level or above to be approved by an advisor.

### Electives (4 hours)

Select electives at the 300 level or above.

**Total: 30-33 semester hours**

## German Minor

*B.A.; B.S. degree*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See information at the beginning of the German section.

### Core Courses (14 hours)

GER 201 - Intermediate German I 4(4-0)  
 GER 202 - Intermediate German II 4(4-0)  
 GER 311 - Advanced German I 3(3-0)  
 GER 312 - Advanced German II 3(3-0)

### Restricted Electives (6 hours)

Select hours from the following:

GER 325 - Modern German Literature in Translation 3(3-0)  
 GER 335 - The Culture of the German Economy 3(3-0)  
 GER 336 - The Culture of German Business 3(3-0)  
 GER 341 - German Cultural History I 3(3-0)  
 GER 342 - German Cultural History II 3(3-0)  
 GER 343 - Survey of German Literature I 3(3-0)  
 GER 344 - Survey of German Literature II 3(3-0)  
 GER 345 - Survey of German Literature III 3(3-0)  
 GER 347 - German Cultural History III 3(3-0)  
 GER 350 - Highlights of German Film 3(3-0)  
 GER 370 - Advanced Studies in German 1-12(Spec)  
 GER 403 - German Literature to 1776 3(3-0)  
 GER 405 - German Classicism 3(3-0)  
 GER 407 - German Literature of the Nineteenth Century 3(3-0)  
 GER 409 - German Literature of the Twentieth Century 3(3-0)  
 GER 470 - Advanced Studies in German 1-12(Spec)

**Note:** GER 370 and 470 can be taken more than once with permission of the advisor.

### Study Abroad

Students wishing to study abroad may substitute GER 210 for a minimum of 4 credits for either GER 201 or 202, or substitute GER 310 for a minimum of 3 credits for 3 credits of restricted electives.

GER 210 - German Language Study Abroad 1-12(Spec)  
 GER 310 - German Language Study Abroad 1-12(Spec)

**Total: 20 semester hours**



## Spanish Language

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

The sequence 101-102-201-202 provides the basis for advanced study in all language majors and minors. Without previous language experience, prospective majors and minors begin with 101. Students who have previously studied a language must take the Language Placement Test, available here: <https://www.cmich.edu/colleges/class/WLC/StudentResources/PlacementTests>. They should enroll in the course indicated by their placement score, and may be eligible for Retroactive Credit (see below). AP, CLEP, International Baccalaureate, and the Michigan Seal of Biliteracy are also accepted; see level equivalencies in Options for Earning Credit in this Bulletin (see the index for page number). For questions about placement, please contact the department.

### Retroactive Credit

Students who take the placement exam and complete their first language course at the 102 level or higher with a grade of B (3.0) or better are eligible for up to 8 hours of retroactive credit. To qualify, this must be the student's first college-level course in this language. Earned credits count toward the University Program Subgroup IV-B. Retroactive credits do not count toward the University Program, but they do count toward the degree and toward some language majors and minors as indicated below for each program.

### Notes:

All Spanish majors are required to take 12 hours of language at the 300 level or above on campus.

One course at the 300 level or 400 level taken on a CR/NC basis may be counted toward a major or minor.

**Transfer Students** majoring in Spanish must earn at least 12 credit hours in their major at CMU; those minoring must earn at least 9 credit hours in their minor at CMU. These hours must be taken on campus.

## Spanish Major

*B.A.; B.S. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See information at the beginning of the Spanish section.

### Core Courses I (14 hours)

SPN 201 - Intermediate Spanish I 4(4-0)  
 SPN 202 - Intermediate Spanish II 4(4-0)  
 SPN 331WI - Advanced Grammar and Composition 3(3-0)  
 SPN 345 - Spanish Pronunciation 3(3-0)

**Note:** Retroactive credits may count toward the Spanish Major. This requirement may be fulfilled with equivalent 3-credit or 4-credit transfer courses.

### Core Courses II (3 hours)

Select one of the following:  
 SPN 376 - Culture and Civilization of Spain 3(3-0)  
 SPN 377 - Culture and Civilization of Latin America 3(3-0)

### Required Courses (15 hours)

Students may specialize in a particular area by choosing one of the following specializations:

#### Specialization 1: Culture and Communication (15 hours)

Nine (9) SPN credits at the 300 level. (3 credits must be in literature or culture.)

Note: SPN 285 may count as one course toward the 9 credits.

Six (6) SPN credits at the 400 level or above. (3 credits must be in literature or culture.)

### Specialization 2: Spanish for the Health, Social, and Legal Professions (15 hours)

#### Required Courses (9 hours)

CGL 350 - Latino Culture in the U.S. 3(3-0)  
 SPN 285 - Language and Foreign Accent Discrimination 3(3-0)  
 SPN 350 - Spanish for the Professions 3(3-0)  
 SPN 375 - Introduction to Spanish/English Translation 3(3-0)  
 SPN 390 - Chicano/Latino Experience in the US 3(3-0)

Note: Only one of SPN 390, SPN 285, or CGL 350 may be counted.

#### Electives (6 hours)

Six (6) SPN credits at the 400 level or above.

### Specialization 3: Spanish for Business (15 hours)

#### Required Courses (15 hours)

SPN 310 - Study Abroad 1-12(Spec)  
 SPN 350 - Spanish for the Professions 3(3-0)  
 SPN 495 - Professional Internship in Spanish 1-6(Spec)

**Note:** Completion of this specialization requires the student to study abroad for one semester during which the student will enroll for 12 credits (6 hours of SPN 310 and 6 hours of SPN 495). At the 300 level, the student takes courses conducted in Spanish and related to business. At the 400 level, the student participates in an internship.

**Note:** Study abroad courses at the appropriate level may be used to fulfill the requirements for the Spanish Major.

**Total: 32 semester hours**

## Spanish Minor

*B.A.; B.S. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See information at the beginning of the Spanish section.

### Core Courses I (14 hours)

SPN 201 - Intermediate Spanish I 4(4-0)  
 SPN 202 - Intermediate Spanish II 4(4-0)  
 SPN 331WI - Advanced Grammar and Composition 3(3-0)  
 SPN 345 - Spanish Pronunciation 3(3-0)

**Note:** Retroactive credits may count toward the Spanish Minor. This requirement may be fulfilled with equivalent 3-credit or 4-credit transfer courses.

### Core Courses II (3 hours)

Select 3 credits from the following:  
 SPN 376 - Culture and Civilization of Spain 3(3-0)  
 SPN 377 - Culture and Civilization of Latin America 3(3-0)

### Required Courses (6 hours)

Select six (6) additional SPN credit hours at the 300 level or above.

**Note:** SPN 285 may count as one course toward the 6 credits at the 300 level or above.

**Note:** Study abroad courses at the appropriate level may be used to fulfill the requirements for the Spanish minor.

**Total: 23 semester hours**

## Certificates

### Undergraduate Certificate - Translation (English and Spanish)

The 12-credit Translation Certificate is designed for undergraduate students who desire to obtain specific training in the area of English-Spanish-English translation. Credits successfully earned with the certificate program may be used toward the Spanish Major on the B.A. / B.S. degree. Students may substitute courses only upon approval of the Spanish Section Coordinator.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

**Prerequisite for admission:** completion of SPN 331WI Advanced Grammar and Composition with a grade of B or better (3 credits), or demonstration of Spanish language abilities at the advanced-low level in writing and reading (according to ACTFL scale) by means of an entrance test.

To earn the certificate, students must successfully complete the set of required courses and earn a cumulative GPA of 3.0 in all required and elective courses.

The certificate may be granted after completion of 12 credits.

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#### Required Courses (6 hours)

SPN 375 - Introduction to Spanish/English Translation 3(3-0)

SPN 475 - Theory and Practice of Translation 3(3-0)

#### Electives (6 hours)

Select two of the following, chosen in consultation with an advisor:

SPN 350 - Spanish for the Professions 3(3-0)

SPN 385 - Introduction to Hispanic Linguistics 3(3-0)

SPN 431WI - Advanced Writing in Spanish 3(3-0)

SPN 440 - Translating Hispanic Voices 3(3-0)

SPN 470 - Advanced Studies in Spanish 1-12(Spec)

SPN 495 - Professional Internship in Spanish 1-6(Spec)

**Note:** For SPN 470, select a section in consultation with a Certificate advisor.

**Total: 12 semester hours**

### Undergraduate Certificate - African and African Diaspora Studies

This is an interdisciplinary certificate. See the Index for the page number.

### Undergraduate Certificate - East Asian Studies

This is an interdisciplinary certificate. See the Index for the page number.

### Undergraduate Certificate - Latin American and Latino Studies

This is an interdisciplinary certificate. See the Index for the page number.

### Undergraduate Certificate - Native American and Indigenous Studies

This is an interdisciplinary certificate. See the Index for the page number.

## Military Science and Leadership

### Course Designator: MSL

For information, contact the chair, 989-774-3049, Finch 111;

<https://www.cmich.edu/academics/colleges/liberal-arts-social-sciences/departments/military-science-leadership>

### Why Study Military Science and Leadership?

Every generation has leaders who stand above the rest. Today's generation needs leaders who are knowledgeable, responsible and have a strong foundation of diverse global experiences. The U.S. Army officer path is one of the best ways to gain this distinct knowledge and experience.

Train as an Army Officer and you train for leadership in and outside the Army. Army Officers have used their careers not only to serve their country, but also the skills they developed in uniform have served them for success in a host of civilian careers. CEOs, business managers, scientists, entrepreneurs, mayors, police officers, teachers and professors have at one time worn officer rank, or still wear it with their participation in the Army Reserve or National Guard. Leadership counts in and outside the Army.

Army Officers can receive funds to further their education or pay off existing student loans. While hands-on skill training in the Army is a key priority, so is encouraging officers to attend college for advanced degrees or continuing education.

### Military Science at CMU

The Military Science / Army ROTC program is one of the best leadership development programs in the nation, committed to attaining a national ranking. The focus of the program is leadership development, and the curriculum supports all degree programs at CMU. All organizations, in all career fields, are looking for proven leaders.

- Our curriculum is fun, challenging, exciting and relevant. Classroom instruction moves quickly from lecture to group discussions, practical exercises, and hands-on experiences that support learning. Planning, participating, and leading physical training/fitness sessions is also a regular component of the curriculum.
- All classes include student-led Leadership Labs, which are hands-on and consist of training such as: rappelling, rock-climbing, high-ropes course, marksmanship, water survival, orienteering, map reading, first aid, weapons, drill, squad tactics, patrolling, and team-building exercises.
- Upper-level courses include a leadership practicum where students apply the leadership lessons they learned in the classroom to real life, by filling leadership positions within the Corps of Cadets. Senior year includes research and battle analysis briefs and culminates with a staff ride to a historically-significant battlefield.
- The Military Science program offers leadership internships both in-state and around the world; basic and advanced leadership camps; leadership development training at the United States Military Academy and in the United Kingdom; leadership training at the Army's most challenging schools, such as Airborne, Air Assault, SCUBA, Northern Warfare, and Mountain Warfare. There exists many team building opportunities within the Military Science and Leadership Department through the participation in one or more of the following Clubs: Rifle Club, Cannon Club, Color Guard, and/or Ranger Club.

The majority of the program's activities are planned, organized, prepared, executed and assessed by student leaders of the Corps of Cadets. The leadership potential of a student is developed through formal leadership assessments and feedback, mentorship, and whole-student counseling.

### The Faculty

LTC John R. Bacon, MSG John S. Grimes, MAJ Nicholas Andrychowski, SFC Joseph Capen, SSG Nicholas King, Mr. Arnaldo Huertas, Mr. Keith Linville, Mr. Brian Jones, Mr. Aaron Stephens

### Career Options

Your experience in the Military Science program provides you with the skills that Fortune 500 companies aggressively seek – proven leadership. Besides your unmatched development as a leader, if you also choose to become an officer, you will expand your breadth and depth of acquired skills, opening up a myriad of opportunities for future employment.

- The Army has 19 exciting and high tech career fields to choose from that directly relate to the civilian sector, some of which are aviation, medical service, engineering, intelligence, security, law enforcement, cybersecurity, information technology, human resources, finance and distribution management.
- Junior military officers are scouted by employment head-hunters. Officers have priority for hiring in government jobs, and many organizations and universities give preference to military officers.
- Nationwide, graduates of ROTC fill high positions in all branches of government (administrative, judicial, and legislative), businesses, non-profit organizations, universities, and professional sports.
- The CMU program has produced numerous presidents/CEOs, vice-presidents of Dow Chemical and Merrill Lynch, justices, professors, general officers, and leaders in national security organizations.
- The program supports lateral entry into America's most elite organizations, like the State Department, Federal Bureau of Investigation (FBI), Central Intelligence Agency (CIA) and the Secret Service.
- Students who choose to serve as officers in the active Army can rejoin the civilian sector after completing their mandatory service obligation. Students who serve in the Reserves have the ability to work anywhere they want, in whatever civilian profession they choose, or to pursue a graduate degree.

For more information about Central Michigan University's Army ROTC program, visit: <https://www.cmich.edu/colleges/class/militaryscience>. To learn more about Army ROTC, please visit <https://www.goarmy.com/rotc>.

## Academic Programs

Military Science instructors are committed to excellence in teaching and learning. The department has been recognized as one of the top programs at CMU in the area of assessment. Students receive credits for each Military Science course. The Military Science department offers two programs:

- The Commissioning Program courses are taken along with your academic degree program courses. Students who desire to become Army Officers receive their commission upon completing both their degree requirements and the military science curriculum. The military science curriculum consists of one class, weekly Leadership Lab, and physical fitness training each semester for eight semesters in progressive order, and a Constitutional History elective. Latecomers and graduate students may make up the first four semesters of the curriculum by attending the month-long Basic Camp during the summer, or by making a commitment to the Reserve Component. All students seeking commissions as officers attend the month-long Advance Camp, which is normally completed during the summer prior to a student's last year of school.
- The Minor in Military Science is designed to provide an interdisciplinary education in military science and leadership. The foundations for this minor are the advanced military science courses, lectures, and a course in military history. This foundation is supplemented by elective studies in cultures, politics, geography, constitutional history and law, public relations, international relations, foreign policy and religion.

## Scholarships

**Army ROTC** student scholarships and other financial aid packages range from \$4,200 to \$21,300 dollars per year. These financial benefits will allow you to focus on excellence in the classroom, as well as engage in extracurricular activities that are an important part of your overall college experience. Students have the option of using an ROTC scholarship towards tuition and fees or room and board costs, on and off campus.

- Incoming freshmen may compete for four-year scholarships worth \$17,500 per year, which provide tuition, book allowance and fees, and monthly spending money, by applying on-line at [armyrotc.com](http://armyrotc.com), and then following up with an on-campus interview. Four-year scholarship students may also receive a matching room and board scholarship from CMU worth an additional \$9,088 per year (see below).
- Students already on campus may compete for two-, three-, and four-year scholarships worth \$17,500 per year, which provide tuition, book allowance and monthly spending money, by applying at our office in Finch 111.

Students may simultaneously enroll in both our program, and the Army National Guard or Army Reserve components. There are substantial benefits to participating in this program, including Leadership Internships, obtaining training in one of 212 marketable job skills, the most lucrative financial aid packages worth \$21,300 per year, and guaranteed duty in the Reserves.

- Students may compete for alumni scholarships worth up to \$2,000, made available through supporters of CMU's Army ROTC program.

There are numerous other national-level scholarships made available through corporations and endowments available exclusively to participants of Army ROTC programs.

- **Reserve Officers' Training Corps (ROTC) Scholarship** was established at CMU in 1993 and provides six room and board scholarships. These are competitive awards given annually to both high school seniors winning four-year ROTC Scholarships and current students.
- **Reserve Components Simultaneous Membership Scholarship Program (SMP)** allows students to earn up to 100% for your college tuition. While obtaining valuable leadership experience in an Army unit.

Additional ROTC scholarship information may be obtained by contacting personnel of the Military Science Department.

## Military Science Minor

*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

The Military Science Minor is designed to provide students with an interdisciplinary approach to the study of the United States Military. Coursework includes a foundation in Military Science and Military History with electives concentrating on constitutional, international, and other issues. The Minor is open to all students; there is no military obligation.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minor in Military Science is available. Students must meet with a Military Science departmental advisor. Students must earn an overall cumulative GPA of 2.0 in Military Science courses in order to receive credit for the minor.
2. Students who are pursuing a commission as an Army Officer must earn an undergraduate degree and meet all of the requirements for their declared academic major and minor if a minor is required. Upon signing an Army ROTC contract to commission, students must continue to meet all of the requirements of that Army ROTC contract in order to be retained in the commissioning program.
3. These requirements include meeting Army physical fitness standards, demonstrating good character, meeting the military science program's academic standards, and attaining the undergraduate degree prior to being commissioned.

### Required Courses I (16 hours)

MSL 301 - Adaptive Team Leadership 4(Spec)  
MSL 302 - Leadership in Changing Environments 4(Spec)  
MSL 401 - Mission Command and Army Profession 4(Spec)  
MSL 402 - Mission Command II and the Company Grade Officer 4(Spec)

### Required Courses II (3 hours)

Select one of the following:

HST 215 - The American Civil War: A House Divided 3(3-0)  
HST 303 - The American Revolution 3(3-0)  
HST 312 - American Military Experience 3(3-0)  
HST 315 - The Vietnam War 3(3-0)  
HST 515 - Civil War and Reconstruction 3(3-0)

### Electives (9 hours)

Select from the following courses in consultation with minor advisor. Other electives may be substituted with advisor's approval.

COM 264 - Communicating in Workplaces 3(3-0)  
GEO 121 - Human Geography and Globalization 3(3-0)  
GEO 346 - Geography of the Developing World 3(3-0)  
JRN 101 - Media and Society 3(3-0)  
JRN 250 - Social Media: Managing the Message 3(3-0)  
JRN 350 - Public Relations Principles and Practices 3(3-0)  
JRN 353 - Foundations of Strategic Public Relations 3(3-0)  
MGT 258 - Effective Management of Human Resources in Organizations 3(3-0)  
MGT 312 - Introduction to Management 3(3-0)  
PAD 210 - Introduction to Public Administration 3(3-0)  
PHL 218 - Ethical Theories 3(3-0)  
PSC 105 - Introduction to American Government and Politics 3(3-0)  
PSC 150 - Introduction to International Relations 3(3-0)  
PSC 151 - The U.S. and the World 3(3-0)  
PSC 421 - Constitutional Law: Powers of Government 3(3-0)  
PSC 453 - American Foreign Policy 3(3-0)  
REL 101 - World Religions: An Introduction to the Study of Religion 3(3-0)  
REL 140 - Religion, Race and Discrimination in America 3(3-0)

**Total: 28 semester hours**



## Philosophy, Anthropology, and Religion

**Course Designators: ANT, IGR, PHL, REL**

For information, please contact the chairperson, 989-774-3444, 288 Anspach Hall.

<https://www.cmich.edu/academics/colleges/liberal-arts-social-sciences/departments/philosophy-anthropology-religion>

### Philosophy, Anthropology and Religion

Philosophy, Anthropology and Religion are disciplines that study human thought and culture from distinct points of view. All disciplines study ethical and cultural issues and form part of the core of a liberal education. Each not only provides training for graduate study in its respective discipline but provides an excellent basis for further professional training in fields which require critical and interpretive skills.

### Why Study Anthropology?

Anthropology is the study of people, their cultures, customs, languages, and origins. Students with an anthropological perspective gain an evolutionary, comparative, and comprehensive view of their own society and of other societies in our world.

### Anthropology at CMU

The department offers a major and minor in Anthropology. Anthropology majors apply on the B.A. and B.S. degrees; minors apply on most degrees. Students may complete the minor entirely online. Consult the degree section of the Bulletin for information on specific degree requirements.

There are three general objectives for undergraduate students:

- To contribute to the student's understanding of the unity and diversity of human beings through the study of evolution, culture, societal development, and the contemporary cultural patterns of many areas of the world.
- To enhance the professional effectiveness of the student entering occupations in which knowledge of human relationships is relevant.
- To prepare the student who seeks graduate education in anthropology.

### Why Study Philosophy?

Philosophy is the study of fundamental questions about the nature of reality, knowledge, and value. These are questions that everyone asks: What am I? Do I have free will? How can we distinguish good from bad or right from wrong? Can we be sure that any of our beliefs are true? Philosophers examine answers to these questions systematically and critically. Philosophy is also very effective in developing the student's ability to reason clearly, to distinguish good from bad arguments, to navigate through a complicated maze of questions, and to use intelligence and logic in situations often ruled by emotions. Students who have taken a large number of philosophy courses excel in entrance exams to graduate and professional schools. The thinking skills you will develop in your philosophy classes will give you the kind of analytic ability sought by employers in many professions.

### Philosophy at CMU

The Philosophy area offers a variety of courses that both make students aware of fundamental philosophical issues such as those about moral and other values, but at the same time strengthen their critical powers and enable them to evaluate better their own beliefs as well as those of other people. Some coursework in this area can benefit students no matter what their field of study.

A major in philosophy is recommended, not only for graduate work in this area, but also as an excellent preparation for law school. A minor in philosophy is recommended to complement many other majors. A number of philosophy courses are related to specific disciplines including Philosophy of Science, Philosophy of Law, Political Philosophy, Philosophy of Mind, Philosophy of Religion, Environmental Ethics, Business Ethics, and Ethics in Health Professions. Courses in the history of philosophy provide a valuable supplement to courses in the humanities and the sciences.

### Why Study Religion?

The academic study of religion explores beliefs, sacred stories, rituals, and community structures of the religious traditions across cultures and time. In practical terms, learning about religions builds insight into major historical events and contemporary political issues, preparing students for new work environments and for citizenship in our increasingly globalized world. The study of religious beliefs and practices helps students analyze relationships between religion and social issues, examine various histories of meaning-making, and how people around the world confront ultimate problems (such as death and evil). Studying religion develops critical writing skills, analytical thinking skills, and effective communication, while also providing an understanding of diverse values and worldviews.

### Religion at CMU

CMU's Religion courses are recommended for those seeking to better understand the culture of the United States and gain wider familiarity with cultures around the world. The Religion area offers courses in Buddhism, Judaism, Christianity, and Islam; in the religious traditions of China, Japan, India, and the U.S.; and in biblical studies, ethics, and the relationship between religion and contemporary society. Most Religion courses fulfill a UP requirement.

A major in religion is recommended for any student seeking an area of concentration within the liberal arts, including those wishing to pursue graduate study in the Humanities and Social Sciences. A minor (or second major) in religion enhances professional careers in sociology, psychology, communications, business, public administration, education, medicine, and more. A Religion degree signals to potential employers and graduate programs an interest in diversity and skills engaging with others in complex environments.

### The Faculty

Andrew Blom, Tracy Brown, Rachel Caspari, Sergio Chavez, Stasia Chavez, Laura Cochrane, Hadley Cooney, Gary Fuller, H. Talat Halman, Jared Halter, Matthew Katz, Heather Kendrick, Hope May, Sara Moslener, Kelly Murphy, Guy Newland, Robert Noggle, Joshua Smith, Carmen White, Cathy Willmeret, Laurel Zwissler

## Anthropology

### Anthropology Major

*B.A.; B.S. degrees*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. With advisor approval, 3 credits in a related discipline may be counted toward the major.
2. No more than 15 credits of transfer credit can count toward the Anthropology Major.
3. No more than 3 credits in the major can be taken as credit/no credit.
4. ANT 451 for majors cannot be taken as credit/no credit.
5. No Anthropology course at the 500 level can be taken by majors for credit/no credit.
6. Anthropology majors are strongly encouraged to gain practical field and/or laboratory experiences as undergraduates in their chosen branch of anthropology and to consider a Study Abroad program and world language study as well.

#### Required Courses I (13 hours)

- ANT 170 - Culture & Human Experience: Introduction to Cultural Anthropology 3(3-0)  
 ANT 171 - Human Origins: Introduction to Biological Anthropology 3(3-0)  
 ANT 173 - Laboratory in Biological Anthropology 1(0-2)  
 ANT 451 - History of Anthropological Thought 3(3-0)  
 ANT 465 - Capstone Experience in Anthropology 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

- ANT 174 - Inequality of the Ancient World: Origins of Early States 3(3-0)  
 ANT 175 - Archaeology of the Americas 3(3-0)

#### Electives (18 hours)

Select one of the following tracks:

##### Electives Track I - Human Heritage (0-18 hours)

These courses focus on the biological and cultural adaptations of our human species through time and into the present.

Select six of the following:

- ANT 200 - Education and Culture 3(3-0)  
 ANT 342 - Principles of Forensic Anthropology 3(3-0)  
 ANT 344 - Michigan Archaeology 3(3-0)  
 ANT 345 - Archaeology & Heritage Management 3(3-0)  
 ANT 347 - Human Evolution 3(3-0)  
 ANT 348 - Stone-Age Europe: Peoples and Cultures of the Distant Past 3(3-0)  
 ANT 356 - Primate Behavior 3(3-0)  
 ANT 380 - Culture, Art, and Community Engagement 3(3-0)  
 ANT 500 - Field School in Archaeology 3-6(Spec)  
 ANT 540/CRM 540 - Archaeological Field and Laboratory Techniques 3(3-0)  
 ANT 542/CRM 542 - Methods in Forensic Anthropology: Osteology and Skeletal Analysis 4(3-2)

##### Electives Track II - Global Studies (0-18 hours)

These courses explore the diversity of past and present human experiences around the world.

Select six of the following:

- ANT 200 - Education and Culture 3(3-0)  
 ANT 202 - Sex and Gender Across the Globe 3(3-0)  
 ANT 240 - Current Native American Issues 3(3-0)  
 ANT 276 - Language, Identity, and Politics 3(3-0)  
 ANT 320 - Native North American Cultures 3(3-0)  
 ANT 321 - Cultures of Latin America 3(3-0)  
 ANT 322 - Cultures of Africa 3(3-0)  
 ANT 324 - Cultures of the South Pacific 3(3-0)

- ANT 340 - South American Archaeology 3(3-0)  
 ANT 370/SOC 370 - Global Environmental Issues 3(3-0)  
 ANT 371/SOC 371 - Culture, Economies, and Social Change 3(3-0)  
 ANT 430 - Applied Anthropology 3(3-0)  
 ANT 459 - Anthropology of Religion 3(3-0)

#### Electives Track III - Race, Gender, and Social Inequalities (0-18 hours)

These courses address historical and current injustices around the world.

Select six of the following:

- ANT 202 - Sex and Gender Across the Globe 3(3-0)  
 ANT 240 - Current Native American Issues 3(3-0)  
 ANT 265WI - Medicine, Health and Illness: Why Culture Matters 3(3-0)  
 ANT 318/SOC 318/SWK 318 - A Toolkit for Advocacy and Activism 3(3-0)  
 ANT 320 - Native North American Cultures 3(3-0)  
 ANT 350/BIO 350/CHM 350WI - Water as Life, Death, and Power 3(3-0)  
 ANT 351 - Human Variation, Race, and the Mistakes We Make 3(3-0)  
 ANT 358 - Plagues and Peoples 3(3-0)  
 ANT 430 - Applied Anthropology 3(3-0)  
 ANT 461 - Race, Racism and Human Evolution 3(3-0)

#### Electives Track IV (0-18 hours)

Students can customize their major to focus on their specific interests. Any ANT designator course above 200 level may be chosen. In addition, courses below may be counted towards Track IV.

- ANT 388 - Special Topics in Anthropology 1-12(Spec)  
 ANT 498 - Independent Studies In Anthropology 1-12(Spec)  
 ANT 588 - Special Topics in Anthropology 1-10(Spec)

**Total: 34 semester hours**

### Anthropology Minor

*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. The anthropology advisor must approve transfer credit for required courses for the anthropology minor.
2. No more than 9 credits from other schools can count toward the Anthropology Minor.
3. No more than 3 credits in the minor can be taken as credit/no credit.
4. No Anthropology course at the 500 level can be taken by minors for credit/no credit.

#### Required Courses I (6 hours)

- ANT 170 - Culture & Human Experience: Introduction to Cultural Anthropology 3(3-0)  
 ANT 171 - Human Origins: Introduction to Biological Anthropology 3(3-0)

#### Required Courses II (3 hours)

- ANT 174 - Inequality of the Ancient World: Origins of Early States 3(3-0)  
 ANT 175 - Archaeology of the Americas 3(3-0)

#### Electives (15 hours)

15 hours of ANT courses at the 200 level or above. With advisor approval, up to 3 hours in a related field may be substituted for ANT electives.

**Total: 24 semester hours**

## Philosophy

### Philosophy Major

*B.A.; B.S. degrees*

#### Required Courses (18 hours)

PHL 100 - Introduction to Philosophy 3(3-0)  
 PHL 140 - Introduction to Symbolic Logic 3(3-0)  
 PHL 200 - History of Philosophy: Classical Period 3(3-0)  
 PHL 218 - Ethical Theories 3(3-0)  
 PHL 302 - History of Philosophy: Modern Period 3(3-0)  
 PHL 490WI - Senior Seminar in Philosophy 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

PHL 320 - Theory of Knowledge 3(3-0)  
 PHL 404 - Twentieth Century Philosophy 3(3-0)

#### Electives (12 hours)

A total of at least 12 additional hours in PHL is required. At least 6 hours must be chosen from the following:

PHL 225/PSY 225 - Foundations of Cognitive Science 3(3-0)  
 PHL 320 - Theory of Knowledge 3(3-0)  
 PHL 325 - Philosophy of Mind 3(3-0)  
 PHL 340 - Advanced Symbolic Logic 3(3-0)  
 PHL 390 - Philosophy of Science 3(3-0)  
 PHL 403 - History of Philosophy: Nineteenth Century 3(3-0)  
 PHL 404 - Twentieth Century Philosophy 3(3-0)  
 PHL 405 - Major Philosophers 3(3-0)  
 PHL 410 - Philosophy of Law 3(3-0)  
 PHL 418 - Advanced Moral Philosophy 3(3-0)  
 PHL 421 - Philosophy of Language 3(3-0)  
 PHL 422 - Political and Social Philosophy 3(3-0)  
 PHL 426/PSC 426/WGS 426 - Feminist Theory 3(3-0)  
 PHL 480 - Philosophy of the Arts 3(3-0)

**Note:** PHL 320 or 404 may be used as an elective if not taken as Required Course II.

Philosophy majors are encouraged to consult with their advisors in selecting their electives. Philosophy majors planning to go to graduate school in philosophy are encouraged to take PHL 340.

#### Total: 33 semester hours

Philosophy courses taken on a Credit/No Credit basis may not be applied toward a philosophy major.

### Philosophy Minor

*B.A.; B.A.A.; B.A.; B.S.; B.S. in B.A. degrees*

#### Required Courses (20 hours)

A minor in philosophy consists of 20 credit hours in philosophy. The program will be designed to fit the individual needs or interests of the student. Students are encouraged to consult a departmental advisor.

Philosophy courses taken on a Credit/No Credit basis may be applied toward a philosophy minor.

#### Total: 20 semester hours

## Religion

### Religion Major

*B.A.; B.S. degrees*

#### Required Courses I (3 hours)

One course in the study of religion and contemporary society to be chosen from:

REL 140 - Religion, Race and Discrimination in America 3(3-0)  
 REL 207 - Women in Religion 3(3-0)  
 REL 235 - Religion and Social Issues 3(3-0)  
 REL 334 - Death and Dying 3(3-0)

#### Required Courses II (3 hours)

Select one from the following:

REL 220 - Religious Traditions of China 3(3-0)  
 REL 221 - Religious Traditions of Japan 3(3-0)  
 REL 222 - Religious Traditions of India 3(3-0)

#### Required Courses III (3 hours)

Select one from the following:

REL 314 - Islam 3(3-0)  
 REL 315 - Judaism 3(3-0)  
 REL 320 - The Buddhist Tradition 3(3-0)

#### Required Courses IV (3 hours)

One course on the Bible or Christianity, to be chosen from:

REL 250 - Creation, Conquest, and Chaos: Introduction to the Old Testament 3(3-0)  
 REL 260 - From Gospel to Apocalypse: Introduction to the New Testament 3(3-0)  
 REL 313 - Christianity 3(3-0)

#### Required Courses V (6 hours)

REL 501WI - Seminar in the Study of Religion 3(3-0)  
 REL 505WI - Research Seminar 3(3-0)

#### Electives (12 hours)

Select 12 additional hours of coursework in religion. Up to 9 of these elective hours may be counted from the cognate courses below. Students may petition to have other courses counted, as long as the 9-hour limit is not exceeded.

ANT 459 - Anthropology of Religion 3(3-0)  
 HST 237 - The Middle East since Muhammad 3(3-0)  
 HST 341 - Renaissance and Reformation 3(3-0)  
 PHL 230 - Philosophy of Religion 3(3-0)

#### Total: 30 semester hours

Religion courses taken on a credit/no credit basis at the 100 and 200 levels may be counted on the major up to a maximum of three hours.

### Religion Minor

*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

The Minor in Religion consists of at least 20 hours of coursework in religion.

Courses selected must take account of the range of a) content and b) method involved in the study of religion. An advisor can help students make appropriate course selections. Courses selected must include:

#### Required Course (3 hours)

REL 501WI - Seminar in the Study of Religion 3(3-0)

#### Electives (17 hours)

At least two additional courses in REL (not including REL 501WI) numbered 300 or higher.

Up to 6 of the 20 hours in REL necessary for their minor may be counted from these cognate courses: PHL 230, HST 237, HST 341, ENG 365, ANT 459.

Students may petition to have other courses counted, as long as the 6-hour limit is not exceeded.

#### Total: 20 semester hours

**Note:** Religion courses taken on a credit/no credit basis at the 100 and 200 levels may be counted on the minor up to a maximum of three hours.

## Other Minors

### Ethics, Values, and Society Minor

*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

#### Core Courses I (9 hours)

PHL 118 - Moral Problems 3(3-0)  
 PHL 218 - Ethical Theories 3(3-0)  
 REL 235 - Religion and Social Issues 3(3-0)

**Required Courses I (3 hours)***Advanced Value Theory*

Select from the following:

- PHL 410 - Philosophy of Law 3(3-0)
- PHL 418 - Advanced Moral Philosophy 3(3-0)
- PHL 422 - Political and Social Philosophy 3(3-0)

**Required Courses II (3 hours)***Applied Value Theory*

Select from the following:

- PHL 128 - Philosophical Perspectives on Poverty & Economic Injustice 3(3-0)
- PHL 158 - Introduction to Environmental Ethics and Justice 3(3-0)
- PHL 318 - Business Ethics 3(3-0)
- PHL 328 - Animal Ethics 3(3-0)
- PHL 480 - Philosophy of the Arts 3(3-0)
- PHL 518 - Professional Ethics 3(3-0)
- REL 334 - Death and Dying 3(3-0)

**Required Courses III (1-6 hours)***Capstone Experience*

During or after the semester in which all other required and elective courses for the minor are completed, the student will arrange an independent study for at least one credit hour. Topic and format will be determined by the instructor in consultation with the student, but may include a research project that integrates material from across the minor or that applies material from the minor to the student's chosen field, a service learning project, or an internship experience.

- PHL 498 - Independent Research 1-6(Spec)

**Electives (6 hours)**

Select two of the following courses. At least one course must be from a designator other than PHL or REL. (Courses in this list may not be counted as electives if they were taken as required courses.)

- ANT 240 - Current Native American Issues 3(3-0)
- BLR 222 - The Search for Racial Justice through Law 3(3-0)
- BLR 310 - Alternative Dispute Resolution in Business 3(3-0)
- CGL 145 - Racism and Discrimination in America through Dialogue 3(3-0)
- HST 226/WGS 226 - From Trials to Women's Liberation: Women in America 3(3-0)
- PHL 118 - Moral Problems 3(3-0)
- PHL 128 - Philosophical Perspectives on Poverty & Economic Injustice 3(3-0)
- PHL 158 - Introduction to Environmental Ethics and Justice 3(3-0)
- PHL 218 - Ethical Theories 3(3-0)
- PHL 318 - Business Ethics 3(3-0)
- PHL 328 - Animal Ethics 3(3-0)
- PHL 345/PSC 325/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)
- PHL 410 - Philosophy of Law 3(3-0)
- PHL 418 - Advanced Moral Philosophy 3(3-0)
- PHL 422 - Political and Social Philosophy 3(3-0)
- PHL 426/PSC 426/WGS 426 - Feminist Theory 3(3-0)
- PHL 480 - Philosophy of the Arts 3(3-0)
- PHL 518 - Professional Ethics 3(3-0)
- PSC 326/WGS 326/PSC 326H - Women and Politics 3(3-0)
- PSC 375 - Modern Ideologies 3(3-0)
- PSC 378 - Modern Democratic Theory 3(3-0)
- PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)
- PSY 334/WGS 334 - Psychology of Women 3(3-0)
- REL 140 - Religion, Race and Discrimination in America 3(3-0)
- REL 207/WGS 207 - Women in Religion 3(3-0)
- REL 235 - Religion and Social Issues 3(3-0)
- REL 334 - Death and Dying 3(3-0)
- SOC 221 - Social Problems 3(3-0)
- SOC 302 - Social Inequality 3(3-0)
- SOC 317/WGS 317 - Sociology of Gender 3(3-0)
- SOC 323 - Racism and Inequality 3(3-0)

**Note:** Students who are also taking either a major or minor in Philosophy may only double count PHL 218 and one 400-level PHL course.

**Total: 22-27 semester hours**

**Intergroup Relations and Justice Minor**

*B.A., B.A.A., B.S. degrees*

The minor in Intergroup Relations and Justice develops critical understanding of relations between social identity groups (across dimensions of race, gender, religion, sexual orientation, ability, and more) and prepares students to communicate and collaborate effectively across these groups. Through dialogue-based learning experiences, emphasizing active listening and critical reflection, the minor provides students with critical analysis, problem-solving, and intercultural leadership skills to create a more just and equitable world.

**Core Courses (12 hours)**

- CGL 145 - Racism and Discrimination in America through Dialogue 3(3-0)
- CGL 445 - Intergroup Dialogue Facilitation 3(3-0)
- PHL 498 - Independent Research 1-6(Spec)
- WGS 245/IGR 245 - Gender Identities in Dialogue 3(3-0)

**Note:** PHL 498 should be taken for 3 hours.

**Electives (9 hours)**

Select 9 credit hours from the following courses:

- ANT 276 - Language, Identity, and Politics 3(3-0)
- ANT 318/SOC 318/SWK 318 - A Toolkit for Advocacy and Activism 3(3-0)
- CGL 302 - Cultural and Global Studies Internship 1-3(Spec)
- ENG 382 - Racism and Diversity in Children's and Young Adult Literature 3(3-0)
- HST 323 - History of Native Americans 3(3-0)
- REL 140 - Religion, Race and Discrimination in America 3(3-0)
- WGS 100 - How Gender Affects Our Lives 3(3-0)
- WGS 204/ENG 204/SOC 204 - LGBTQ Identities 3(3-0)

**Total: 21 semester hours**

**Certificates****Undergraduate Certificate - Critical Reasoning****Minimum Totals for Graduation: 12 hours**

This 12-credit-hour certificate is designed for degree-seeking students in any major and non-degree-seeking students who want to enhance their critical reasoning skills. The certificate offers a concentrated course of study focusing on argumentative structure and evaluation, and employing the tools of fundamental logic and probability theory. This course of study will help prepare students entering the work force in a wide variety of capacities, as well as students entering graduate or professional school.

**Required Courses I (6 hours)**

Select any two of the following:

- PHL 140 - Introduction to Symbolic Logic 3(3-0)
- PHL 141QR - Introduction to Logical Problem Solving 3(3-0)
- PHL 145QR - Chances, Choices, and Everyday Reasoning 3(3-0)

**Note:** Students may count PHL 140 or PHL 141QR, but not both.

**Required Courses II (6 hours)**

Select any two of the following:

- PHL 320 - Theory of Knowledge 3(3-0)
- PHL 335 - Philosophy of Psychology 3(3-0)
- PHL 340 - Advanced Symbolic Logic 3(3-0)
- PHL 348 - Decision Theory 3(3-0)
- PHL 390 - Philosophy of Science 3(3-0)

**Total: 12 semester hours**

**Undergraduate Certificates**

These are interdisciplinary or interdepartmental certificates. Please see the index for page number:

- **Applied Forensic Studies**
- **Cultural Competency**



## Politics, Society, Justice, and Public Service

**Course Designators: PAD, PSC, SOC, SCJ, SWK**

For information, please contact the chairperson, 989-774-3442, 142 Anspach Hall,  
<https://www.cmich.edu/academics/colleges/liberal-arts-social-sciences/departments/politics-society-justice-public-service>

The School of Politics, Society, Justice, and Public Service houses the undergraduate programs in International Relations, Political Science, Public and Nonprofit Administration, Social and Criminal Justice, Social Work, Sociology, and Youth Studies.

### Why Study International Relations?

International relations examines the global challenges facing the international community. Students develop an understanding of international security issues, international organizations, international political economy, and threats to human rights and the global environment. They also gain cultural competency and an understanding of political systems around the world through the study of comparative politics.

### International Relations at CMU

Those planning careers in international governmental and nongovernmental agencies; private business overseas; and the Foreign Service would be well served by the international relations major.

### Why Study Political Science?

Political science explores how people participate in collective decision making to identify and solve issues of shared, public concern. Given both the historical and current exclusion of some people from the governing process, political science also often includes an examination of perennial normative questions, such as what constitutes a just society.

### Political Science at CMU

Many political science majors or minors are interested in learning more about lawmaking and legal processes, which is good preparation for a legal career, including gaining admission to law school. Others choose to focus their studies on campaigns and elections and become engaged in the melee of modern political campaigns and social movements. All students develop an appreciation of political institutions and processes that help us better understand the functioning of government and the role that individuals play in determining outcomes that shape the future.

### Why Study Public and Nonprofit Administration?

Coursework provides students the necessary skills in human resources, public budgeting, organizational leadership, public policy analysis, engaging stakeholders, and employee motivation that make administrators and leaders successful in the public and nonprofit sectors. This preparation will ensure effective and accountable decision-making as graduates lead, manage, and serve in the public sector.

### Public and Nonprofit Administration at CMU

Public & nonprofit administration emphasizes the teaching of management and analysis skills, specifically relevant to the government and nonprofit sectors. Students with this major can obtain jobs as a/an: Budget Analyst; City and County Manager; Corporate Social Responsibility Officer; Executive Director of a Nonprofit Organization; Fundraiser; Policy Analyst; Private Sector Manager; Public Manager; or Volunteer Manager.

The school offers a Certified Nonprofit Professional (CNP) credential, the only national nonprofit credential preparing students (undergraduate, graduate, or post-graduate) for careers in nonprofit management. Due to the unique combination of classroom training, practical experience, and leadership activities, CNPs get hired and rise more quickly in their organizations. The four components of certification include coursework, internship (or professional nonprofit experience), professional development, and leadership and service activities.

### Why Study Social and Criminal Justice?

The sociology major with a concentration in social and criminal justice leads to careers supporting innovations in offender accountability and rehabilitation, meeting the needs of victims, and supporting community efforts to promote safety, security, and conflict resolution. A minor in Social and Criminal Justice is also offered.

### Social and Criminal Justice at CMU

The program emphasizes understanding criminal justice within the broader social justice context. The program focuses on community-based justice and has courses in criminology, community corrections and alternative sentencing, inequalities and justice processes, victimology, juvenile delinquency, government and corporate crime and policing. Students have internships with social, human service, and justice agencies. Some graduates chose to pursue advanced professional studies. Others begin entry-level careers in probation, parole, alternative sentencing and diversity programs, day-treatment, community mediation, and social and human services.

## Why Study Social Work?

Social work offers a professional degree whose graduates will work with people of all ages, backgrounds, and social identities in a variety of settings. It combines practice skills and knowledge with a strong emphasis on social justice and self-determination, leading to a highly marketable degree.

## Social Work at CMU

The social work major on the Bachelor of Social Work (BSW) degree prepares students for generalist practice and leads to eligibility for professional licensure from our accredited program. Core competencies are learned through a blend of theory, practice, research, and policy courses, with an emphasis on social justice and empowerment. Applied experiences, including 400 hours of practicum, are required.

Students interested in the social work professional degree should make an appointment with a social work advisor early in their academic career to develop a course plan and assure they understand requirements and timing for admission. A student must complete at least 50 credit hours to apply. Declaring a major in social work does not guarantee admission to the Bachelor of Social Work Program. Students often add a second major in other fields such as psychology, family studies, social and criminal justice, sociology, or Spanish. A minor in social work is not available.

## Why Study Sociology?

Sociology is the study in understanding social justice, inequality, and diversity, and the application of research to solve real world problems.

## Sociology at CMU

Our faculty promote critical, data-driven approaches for addressing social issues. The Sociology major or minor offers students a sound understanding of socialization, social relations, and social institutions. Many alumni work in social services, work in private business, or pursue graduate studies.

## Why Study Youth Studies?

Youth studies recognizes the ways that gender, race, ethnicity, social class, sexual orientation, and gender identity influence youth development. With training in youth studies, students learn how to implement and evaluate preventative and positive youth development programs.

## Youth Studies at CMU

The sociology major with a concentration in youth Studies and the youth Studies minor prepares students to work in community and school programs designed to improve the experiences of youth. Classes include the sociology of adolescence, childhood, family, education, youth deviance, and youth welfare. A capstone course includes a service-learning component in a local school or agency. Many graduates work in schools, juvenile justice systems, social justice organizations and recreational programs.

## Certified Nonprofit Professional Credential

The Certified Nonprofit Professional credential is the only national nonprofit credential preparing students (undergraduate, graduate, or post-graduate) for careers in nonprofit management.

This group is a powerful network of professionals who are leading some of the country's most successful social-impact organizations. In addition, the national and local nonprofit organizations that are part of the Alliance network hire more than 50,000 people annually. These are organizations that value the training and preparation that is core to the CNP program. Recent research completed by an independent organization shows that CNPs are seven times (7x!) more likely to rise to director+ level than their non-CNP peers.

Due to the unique combination of classroom training, practical experience and leadership activities, CNPs get hired and rise more quickly in their organizations. Plus, CNPs have access to CNP Launch, an exclusive matching system that connects our students and CNPs with nonprofits that are hiring interns and employees.

For more information on the CNP credential, see <https://www.cmich.edu/academics/colleges/liberal-arts-social-sciences/departments/politics-society-justice-public-service/political-science-public-administration/certified-nonprofit-professional-program> or contact the department.

## Student Organizations

For more information, see the following [webpage](#) or contact [SPSJPS@cmich.edu](mailto:SPSJPS@cmich.edu).

## The Faculty

Larry Adamitis, Prakash Adhikari, Mensah Adinkrah, Elbert P. Almazan, Elizabeth Bradshaw, Edward Clayton, Aaron Foote, Amanda Garrison, Thomas Greitens, Susan Grettenberger, Rebecca Hayes, Deana Hunt, David K. Jesuit, David Kinney, Sharon Kukla-Acevedo, Valerie Muniz, Emma Powell, Alan Rudy, Jody Sauer, Lissa Schwander, Mary Scheuer Senter, Brian Smith, Kyla Stepp, Cedric Taylor, Grace Vandemark, Selene Wadhawan, Colleen Wilson-Rood

## Majors

### International Relations Major

*B.A.; B.S. degrees*

An International Relations major consists of 33 hours. Majors and minors in International Relations should enroll in PSC 150 as freshmen (see course description).

It is recommended that all International Relations majors enroll in PSC 280QR during their sophomore year.

Any regular faculty member in the school can serve as the student's advisor on a major or minor.

**Internships:** The school has established an internship program where students are provided relevant firsthand work experience. The duration of an internship can vary depending on the number of credit hours (1-12) taken.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minimum of 15 hours of PSC and/or PAD course work must be at the 300 level or above.
2. No more than 15 credits may be double counted with the Political Science Minor.
3. Courses taken on a Credit/No Credit basis may not be counted toward majors or minors in the School of Politics, Society, Justice and Public Service, with the following exceptions: internship (PSC 395), practicums (PSC 394) and lab course (PSC 355). In the case of these exceptions, no more than three credits total may be applied to the major or minor.
4. Transfer students majoring in International Relations will be expected to take at least 15 hours of coursework in the school; transfer minors, 12 hours.
5. Students majoring in International Relations are allowed to count three internship credit hours toward their major.

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#### Required Courses (12 hours)

PSC 150 - Introduction to International Relations 3(3-0)  
 PSC 242 - Introduction to Comparative Politics 3(3-0)  
 PSC 280QR - Introduction to Empirical Methods of Political Research 3(3-0)  
 PSC 375 - Modern Ideologies 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:  
 PSC 340 - African Political Systems and Processes 3(3-0)  
 PSC 344 - East Asian Political Systems and Processes 3(3-0)  
 PSC 345 - Middle Eastern Political Systems 3(3-0)  
 PSC 346 - The Politics of Islam 3(3-0)  
 PSC 347 - Europe and the European Union 3(3-0)  
 PSC 348 - Latin American Political Systems 3(3-0)  
 PSC 370 - Gurus, Avatars, and Nukes: South Asian Politics 3(3-0)  
 PSC 515 - Comparative Public Policy 3(3-0)

#### Required Courses III (3 hours)

Select any PSC course at the 500 level, preferably from the list below.  
 Credit may not be earned in more than one of these courses.  
 PSC 501 - Bullets not Ballots: Revolution, Insurgency and Civil War 3(3-0)  
 PSC 515 - Comparative Public Policy 3(3-0)  
 PSC 536 - Refugees and Forced Migration Studies 3(3-0)  
 PSC 551 - Seminar in International Relations 3(3-0)  
 PSC 555 - International Law I 3(3-0)  
 PSC 557 - War and Peace Studies 3(3-0)

#### Electives (15 hours)

Select 15 hours of PSC and/or PAD courses.

#### OR

Select one of the following certificates:

Undergraduate Certificate - Global Governance and Advocacy  
 Undergraduate Certificate - International Security Studies

A student earning a certificate must choose courses different than

those chosen to fulfill the major required courses. Up to 6 hours of course work from one certificate may be used to fulfill requirements in another certificate in the school. Although the major may be combined with any of the certificates, students pursuing the major in international relations are advised to consider choosing one from among the list above.

**Total: 33 semester hours**

### Political Science Major

*B.A.; B.S. degrees*

A political science major consists of 33 hours. A minimum of 15 hours of course work must be at the 300 level or above.

Courses taken on a Credit/No Credit basis may not be counted toward political science majors or political science minors, with the following exceptions: Internships (PSC 395), Practicums (PSC 394) and lab courses (PSC 355). In the case of these exceptions, no more than three credits total may be applied to the major or minor. Majors and minors in political science should enroll in PSC 105 as freshmen (see course description). Transfer students majoring in political science will be expected to take at least 15 hours of coursework in the school; transfer minors, 12 hours.

It is recommended that all political science majors enroll in PSC 280QR during their sophomore year.

Any regular faculty member in the school can serve as the student's advisor on a major or minor.

**Internships:** The school has established an internship program where students are provided relevant firsthand work experience. The duration of an internship can vary depending on the number of credit hours (1-12) taken. Students majoring in political science are allowed to count three internship credit hours toward their major or minor.

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#### Required Courses I (15 hours)

PSC 100 - Introduction to Political Science 3(3-0)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)  
 PSC 261 - State and Local Government 3(3-0)  
 PSC 275 - Great Political Thinkers 3(3-0)  
 PSC 280QR - Introduction to Empirical Methods of Political Research 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

PSC 513 - Citizen Engagement in Public Life 3(3-0)  
 PSC 520 - American National Government and Politics 3(3-0)  
 PSC 590 - Independent Study 1-6(Spec)

#### Required Courses III (15 hours)

Select 15 hours of PSC and/or PAD courses.

#### OR

Select one of the following certificates:

Undergraduate Certificate - Citizen Engagement  
 Undergraduate Certificate - Political Advocacy and Elections  
 Undergraduate Certificate - Lawmaking and Legal Processes

A student earning a certificate must choose courses different than those chosen to fulfill the major required courses. Up to 6 hours of course work from one certificate may be used to fulfill requirements in another certificate in the school. Although the major may be combined with any of the certificates, students pursuing the major in Political Science are advised to consider choosing one from among the list above.

**Total: 33 semester hours**

**Note:** A minimum of 15 hours of PSC and/or PAD course work must be at the 300 level or above.

## Public and Nonprofit Administration Major

*B.A.; B.S. degrees*

A Public and Nonprofit Administration major consists of 33 hours. A minimum of 15 hours of course work must be at the 300 level or above, with at least one course at the 400-500 level. PSC 405 cannot be used to fulfill this requirement. No more than 15 credits may be double counted with the Political Science Minor.

Courses taken on a Credit/No Credit basis may not be counted toward Public and Nonprofit Administration majors, with the following exceptions: internship (PSC 395), practicums (PSC 394) and lab course (PSC 355). In the case of these exceptions, no more than three credits total may be applied to the major or minor. Transfer students majoring in Public and Nonprofit Administration will be expected to take at least 15 hours of coursework in the school; transfer minors, 12 hours.

It is recommended that all Public and Nonprofit Administration majors enroll in PAD 380QR or PSC 280QR during their junior year.

Any regular faculty member in the school can serve as the student's advisor on a major or minor.

**Internships:** The school has established an internship program where students are provided relevant firsthand work experience. The duration of an internship can vary depending on the number of credit hours (1-12) taken. Students majoring in Public and Nonprofit Administration, as well as the public administration minor are allowed to count three internship credit hours toward their major or minor.

### Required Courses (18 hours)

PAD 210 - Introduction to Public Administration 3(3-0)

PAD 211 - Introduction to Nonprofit Leadership 3(3-0)

PAD 313 - Public Budgeting Processes 3(3-0)

PAD 380QR - Public Sector Research Methods 3(3-0)

PAD 411 - Public Sector Human Resources 3(3-0)

PSC 395 - Internship in Government and Politics 1-12(Spec)

### Notes:

- Students may take PSC 280QR in lieu of PAD 380QR.
- PSC 395 is required for students without any relevant administrative experience. Student must have completed 56 hours or more. Students with previous relevant administrative experience may select an Independent Study (PSC 390) for three credits with permission of the Internship Director.

### Electives (15 hours)

Select five PSC or PAD courses, at least two of which are PAD courses.

**OR** select one of the following certificates:

- Undergraduate Certificate - International Non-Governmental Organization (NGO) Administration
- Undergraduate Certificate - Public Policy Analysis
- Undergraduate Certificate - Public and Social Entrepreneurship

**Note:** A student earning a certificate must choose courses different than those chosen to fulfill the major required courses. Up to 6 hours of coursework from one certificate may be used to fulfill requirements in another certificate in the school. Although the major may be combined with any of the certificates, students pursuing the major in public and nonprofit administration are advised to consider choosing one from among the list above.

**Total: 33 semester hours**

## Social Work Major

*B.S.W. Degree*

The social work major on the BSW degree plan prepares students for generalist practice in the field of social work. The core competencies are learned through a blend of theory, practice, research and policy courses and implemented during the 400 hour practicum that students complete in their final two semesters.

Students intending to apply to the social work program should make an appointment with a social work advisor early in their academic career to assure they understand the requirements for admissions. Application for admission to the program is typically completed in the spring semester of the traditional sophomore year. Students should consult their advisor about applying. Students should declare a major by the end of their sophomore year. Declaring a major does not guarantee admission to the Bachelor of Social Work Program. A minor in Social Work is not available.

Social work advising appointments may be booked online at [class.cmich.edu/socialworkadvising](http://class.cmich.edu/socialworkadvising) or by contact the program office by phone at 989-774-2690, by email at [swk@cmich.edu](mailto:swk@cmich.edu) or by text at 989-209-7847.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

#### Admission Requirements

1. **Application** - Students need to apply to the Social Work Program by the third Friday in February or the third Friday in October. The application must include the following:

- Application
- Personal Interest Statement (using the prompts provided in the application).
- Approval Form for the Social Work Related Experience

2. **Coursework** - Students need to complete the following coursework by the end of the semester in which they apply.

- At least 50 credits with a cumulative GPA of 2.5 or better.
- A minimum of 12 credits of major courses with a major GPA of 2.7 or better and no grade below a C in any required major course.
  - SWK 100 with a C or better.
  - SWK 205 with a B- or better.
  - SWK 250 with a B- or better.

**Note:** It is recommended that students complete SOC 200 or its equivalent by the end of the semester in which they apply.

- Math competency with a C or better.
- Freshman English Competency with a C or better
- Oral English Competency with a C or better.

3. **Academic References** - Students must request two college-level instructors to complete and return an Academic Reference form to the social work office by the end of the semester in which they apply. CMU social work faculty are not allowed to serve as a referee.

4. **Social Work Related Experience (Volunteer or Paid)** - Students must complete a minimum of 50 hours of approved social work related experience by the end of the semester in which they apply. Social work related experience is documented with the following forms:

- Approval Form - Social Work Related Experience (submit this as soon as a site is identified and no later than the application deadline)
- Reference Form - Social Work Related Experience documenting completion of at least 50 hours (due by the end of the semester of application).
- Reflection Statement - a written response to prompts about the Social Work Related experience (due by the end of the semester of application).

**Note:** 100 hours of social work related experience is required prior to enrollment into SWK 321 (spring of junior year). This may be documented with an additional form(s) if not complete by the time of admission to the program.

(continued)



The BSW Program Application, the Personal Interest Statement, and the Approval Form for the Social Work Related Experience requirement must be received in the Social Work Program office, Anspach Hall 034, Mount Pleasant, MI 48859, or by email to [swk@cmich.edu](mailto:swk@cmich.edu) on or before the third Friday in February for the annual Spring admissions cycle or on or before the third Friday in October for the Fall admissions cycle. Admission information and forms are available on the social work website at [class.cmich.edu/socialwork](http://class.cmich.edu/socialwork).

Faculty interviews may be part of the admissions process. Admission decisions will be made by the Admissions Committee, which reserves the right to admit students who may be deficient in requirements above. Applicants will be notified of decisions by email to their CMU account. Additional information about the admissions process is available from the social work office in Anspach 034.

**Note:** Completion of all steps of the admissions process does not assure that the student will be admitted to the BSW Program. Depending on the number of students admitted during the spring admission cycle, the admission cycle for the following fall may be limited or suspended. Therefore, it is highly recommended that students apply in the spring.

#### Retention and Termination Standards

1. Students may be required to take courses and related pre/co-requisites as revised to meet accreditation standards. Students should consult their advisor with any concerns or to make needed major modifications.
2. Students must earn a minimum of a B-(2.7) or better in any 200 level or above social work course.
3. Students must achieve a 2.7 major GPA or better to graduate with this major.
4. Students must maintain a cumulative GPA of no less than a 2.5.
5. Students admitted to the social work program should consult the *Student Handbook for the Retention and Termination Policy*, which contains standards for continued academic and professional performance following admission.

#### Required Courses I (43 hours)

SOC 100 - Introductory Sociology 3(3-0)  
 SWK 100 - Introduction to Social Work 3(3-0)  
 SWK 205 - Pre-professional Seminar 1(1-0)  
 SWK 250 - Social Welfare Policies and Services I 3(3-0)  
 SWK 315 - Social Work Generalist Practice I 3(3-0)  
 SWK 321 - Social Work Generalist Practice II 3(3-0)  
 SWK 331WI - Social Work Generalist Practice III 3(3-0)  
 SWK 350 - Social Work Research Methodologies 3(3-0)  
 SWK 374 - Social Work and Human Behavior I 3(3-0)  
 SWK 375 - Social Work and Human Behavior II 3(3-0)  
 SWK 450 - Social Welfare Policies and Services II 3(3-0)  
 SWK 470 - Social Work Practicum I 4(Spec)  
 SWK 471 - Social Work Practicum Seminar I 2(2-0)  
 SWK 480 - Social Work Practicum II 4(Spec)  
 SWK 481 - Social Work Practicum Seminar II 2(2-0)

**Note:** SWK 450 is approved for offering as WI.

#### Required Courses II (3 hours)

Select one of the following:  
 SOC 221 - Social Problems 3(3-0)  
 SOC 302 - Social Inequality 3(3-0)

#### Required Courses III (3 hours)

Select one of the following:  
 PSY 211QR - Introduction to Psychological Statistics 3(3-0)  
 SOC 200 - Introduction to Social Research and Analysis 3(3-0)  
 STA 282QR - Introduction to Statistics 3(3-0)

**Total: 49 semester hours**

## Sociology Major

*B.A.; B.S. degrees*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students must earn a grade of C (2.0) or better in SOC 200, 301, and 350.
2. No more than three hours of coursework can be taken on a Credit/No Credit basis for the major, not including courses that are only offered with this grading option.
3. At least 9 credit hours of required electives must be taken at the 300-level or above.
4. No more than 15 hours of coursework can transfer to the major from another institution.
5. Up to three hours of coursework with an ANT or SWK designator may be taken as part of the Sociology Major.

#### Core Courses (19 hours)

SOC 100 - Introductory Sociology 3(3-0)  
 SOC 200 - Introduction to Social Research and Analysis 3(3-0)  
 SOC 250 - Pro-Seminar in Sociology 1(1-0)  
 SOC 301 - Sociological Theory 3(3-0)  
 SOC 302 - Social Inequality 3(3-0)  
 SOC 350 - Social Research Methodologies 3(3-0)  
 SOC 465 - Sociology Capstone 3(3-0)

#### Electives (18 hours)

To complete the 18 hours of Electives, students must take at least two courses in each Elective Area. The additional 6 hours of Electives can consist of any SOC course(s) or a combination of one SOC course and either one ANT or SWK course.

##### Electives I (6-12 hours)

###### *Individuals and Institutions*

At least two of the following:  
 SOC 201 - Social Psychology 3(3-0)  
 SOC 210 - Sociology of Science and Technology 3(3-0)  
 SOC 311 - Sociology of Education 3(3-0)  
 SOC 321 - Deviant Behavior 3(3-0)  
 SOC 403 - Political Sociology 3(3-0)  
 SOC 411 - The Family 3(3-0)  
 SOC 412 - Sociology of Adolescence 3(3-0)  
 SOC 425 - Sociology of Childhood 3(3-0)  
 SOC 514 - Sociology of Health and Illness 3(3-0)

##### Electives II (6-12 hours)

###### *Dimensions of Inequalities*

At least two of the following:  
 SOC 204/WGS 204/ENG 204 - LGBTQ Identities 3(3-0)  
 SOC 205 - Social Justice in a Global Society 3(3-0)  
 SOC 307 - Social Movements, 1960s to the Present 3(3-0)  
 SOC 317/WGS 317 - Sociology of Gender 3(3-0)  
 SOC 318/ANT 318/SWK 318 - A Toolkit for Advocacy and Activism 3(3-0)  
 SOC 323 - Racism and Inequality 3(3-0)  
 SOC 326 - Inequalities and Justice Processes: Race, Class and Gender 3(3-0)  
 SOC 370/ANT 370 - Global Environmental Issues 3(3-0)  
 SOC 444 - Human Trafficking 3(3-0)  
 SOC 507 - Class and Poverty in America 3(3-0)

**Total: 37 semester hours**

## Sociology Major: Social and Criminal Justice Concentration

*B.A.; B.S. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students must earn a grade of C (2.0) or better in SOC 200, SOC 301, and SOC 350. SOC 200, SOC 301, AND SOC 350 cannot be taken on a Credit/No Credit basis.
2. No more than three hours of coursework can be taken on a Credit/No Credit basis for the major, not including courses that are only offered with this grading option.
3. No more than 15 hours of coursework can transfer to the major from another institution.
4. Students must earn a grade of C (2.0) or better in SOC 523 in order to continue with SOC 525.

### Required Courses I (12 hours)

SOC 100 - Introductory Sociology 3(3-0)  
 SOC 200 - Introduction to Social Research and Analysis 3(3-0)  
 SOC 301 - Sociological Theory 3(3-0)  
 SOC 350 - Social Research Methodologies 3(3-0)

### Required Courses II (3 hours)

Select one of the following:  
 SOC 302 - Social Inequality 3(3-0)  
 SOC 323 - Racism and Inequality 3(3-0)

### Required Courses III (18 hours)

SOC 220 - Introduction to Social and Criminal Justice 3(3-0)  
 SOC 324 - Criminology 3(3-0)  
 SOC 326 - Inequalities and Justice Processes: Race, Class and Gender 3(3-0)  
 SOC 523 - Community Corrections and Alternative Sentencing 3(3-0)  
 SOC 525 - Internship in Social and Criminal Justice 6(Spec)

### Electives I (3 hours)

Select one of the following:  
 SOC 215 - Youth, Deviance, and Institutions 3(3-0)  
 SOC 222 - Juvenile Delinquency 3(3-0)  
 SOC 422/SWK 422 - Youth Welfare 3(3-0)

### Electives II (6 hours)

Select two of the following:  
 SOC 315 - Rape Culture 3(3-0)  
 SOC 330 - Social Issues through the Prism of a Prison 3(3-0)  
 SOC 333 - Government and Corporate Crime 3(3-0)  
 SOC 399 - Special Topics in Sociology 1-12(Spec)  
 SOC 409 - Victimology 3(3-0)  
 SOC 444 - Human Trafficking 3(3-0)  
 SOC 515 - Custodial Institutions 3(3-0)  
 SOC 524 - Sociology of Law 3(3-0)  
 SOC 526 - Police and Community Relations 3(3-0)

**Note:** SOC 399 may be applied only when the special topic pertains to a social and criminal justice area, with permission of advisor.

**Total: 42 semester hours**

## Sociology Major: Youth Studies Concentration

*B.A.; B.S. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students must earn a grade of C (2.0) or better in SOC 200, 301, and 350.
2. SOC 200, 301, and 350 cannot be taken on a Credit/No Credit basis.
3. No more than three hours of coursework can be taken on a Credit/No Credit basis for the major, not including courses that are only offered with this grading option.
4. No more than 15 hours of coursework can transfer to the major from another institution.

### Required Courses I (12 hours)

SOC 100 - Introductory Sociology 3(3-0)  
 SOC 200 - Introduction to Social Research and Analysis 3(3-0)  
 SOC 301 - Sociological Theory 3(3-0)  
 SOC 350 - Social Research Methodologies 3(3-0)

### Required Courses II (3 hours)

Select one of the following:  
 SOC 221 - Social Problems 3(3-0)  
 SOC 302 - Social Inequality 3(3-0)

### Required Courses III (12 hours)

SOC 215 - Youth, Deviance, and Institutions 3(3-0)  
 SOC 411 - The Family 3(3-0)  
 SOC 412 - Sociology of Adolescence 3(3-0)  
 SOC 425 - Sociology of Childhood 3(3-0)

### Required Courses IV (3 hours)

Select one of the following:  
 ANT 200 - Education and Culture 3(3-0)  
 SOC 311 - Sociology of Education 3(3-0)

### Required Courses V (3 hours)

One Development Course from outside the school, selected from:  
 HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)  
 HDF 306 - Adolescent Development 3(3-0)  
 HST 221 - Growing Up in America 3(3-0)  
 PSY 220 - Developmental Psychology 3(3-0)  
 PSY 324 - Childhood and Adolescence 3(3-0)

### Capstone Experience (3 hours)

SOC 530 - Capstone Experience in Youth Studies 3(3-0)

**Total: 36 semester hours**

## Minors

### Political Science Minor

*B.A.; B.A.A.; B.S. degrees*

A Political Science minor consists of 21 hours. Courses taken on a credit/no credit basis may not be counted toward this minor.

No more than 15 credits may be double counted for this minor and the Public and Nonprofit Administration Major or the International Relations Major. Students may not declare both a major and minor in Political Science.

#### Required Course (3 hours)

PSC 105 - Introduction to American Government and Politics 3(3-0)

#### Other Requirements (12 hours)

Select one 3-credit hour course in four of the following five fields:

##### Field I

*American National Political Institutions and Processes*

PSC 101 - Political Behavior 3(3-0)

PSC 125 - African-American Politics 3(3-0)

PSC 320 - The American Legislative Process 3(3-0)

PSC 321 - The American Chief Executive 3(3-0)

PSC 322 - Judicial Process and Politics 3(3-0)

PSC 323 - American Parties and Politics 3(3-0)

PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)

PSC 326/WGS 326 - Women and Politics 3(3-0)

PSC 327 - Lobbying and Interest Group Behavior 3(3-0)

PSC 328 - Campaigns and Elections 3(3-0)

PSC 421 - Constitutional Law: Powers of Government 3(3-0)

PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)

PSC 520 - American National Government and Politics 3(3-0)

##### Field II

*American State and Local Government, Public Administration and Policy*

PAD 210 - Introduction to Public Administration 3(3-0)

PAD 313 - Public Budgeting Processes 3(3-0)

PAD 411 - Public Sector Human Resources 3(3-0)

PAD 585 - Public Sector Information Technology Management 3(3-0)

PSC 261 - State and Local Government 3(3-0)

PSC 300 - Michigan Politics and Elections 3(3-0)

PSC 301 - Law and Policy in Michigan State Government 3(3-0)

PSC 514 - American Public Policy Making 3(3-0)

PSC 516 - Environmental Politics and Policy 3(3-0)

PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

PSC 563 - Politics and Policy in Urban Communities 3(3-0)

PSC 566 - Intergovernmental Relations in the United States 3(3-0)

##### Field III

*International Relations*

PSC 150 - Introduction to International Relations 3(3-0)

PSC 151 - The U.S. and the World 3(3-0)

PSC 351 - International Relations 3(3-0)

PSC 352 - US - Latin American Relations 3(3-0)

PSC 353 - Model United Nations 3(3-0)

PSC 453 - American Foreign Policy 3(3-0)

PSC 551 - Seminar in International Relations 3(3-0)

PSC 555 - International Law I 3(3-0)

PSC 556 - International Law II 3(3-0)

##### Field IV

*Comparative Politics*

PSC 242 - Introduction to Comparative Politics 3(3-0)

PSC 340 - African Political Systems and Processes 3(3-0)

PSC 344 - East Asian Political Systems and Processes 3(3-0)

PSC 345 - Middle Eastern Political Systems 3(3-0)

PSC 346 - The Politics of Islam 3(3-0)

PSC 347 - Europe and the European Union 3(3-0)

PSC 348 - Latin American Political Systems 3(3-0)

PSC 515 - Comparative Public Policy 3(3-0)

### Field V

*Political Theory*

PSC 275 - Great Political Thinkers 3(3-0)

PSC 280QR- Introduction to Empirical Methods of Political Research 3(3-0)

PSC 371 - American Political Thought 3(3-0)

PSC 372 - American Radical Thought 3(3-0)

PSC 375 - Modern Ideologies 3(3-0)

PSC 378 - Modern Democratic Theory 3(3-0)

PSC 381 - Slavery, Tyranny, Democracy: Classical Origins of Modern Ideas 3(3-0)

PSC 426/PHL 426/WGS 426 - Feminist Theory 3(3-0)

PSC 583 - Survey Research 3(3-0)

#### Other Requirements (6 hours)

Select hours from the five fields listed above.

**Total: 21 semester hours**

### Public Law Minor

*B.A., B.A.A., B.S. degrees*

The Public Law minor provides students with working knowledge of the American justice system along with means of legal advocacy for traditionally marginalized groups. Practical skills are developed and enhanced that allow students to work more effectively in and alongside the judicial system, acquire intimate knowledge of advocacy within legal institutions, and pursue justice for historically under-represented people.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

No more than 15 credits may be double counted for this minor and the Political Science major.

#### Required Courses I (9 hours)

*Overview of Judicial Process & Types of Public Law*

PSC 105 - Introduction to American Government and Politics 3(3-0)

PSC 322 - Judicial Process and Politics 3(3-0)

PSC 365/SOC 365 - Criminal Law 3(3-0)

#### Required Courses II (3 hours)

*Overview of Judicial Process & Types of Public Law*

Select one of the following:

PSC 421 - Constitutional Law: Powers of Government 3(3-0)

PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)

#### Electives (9 hours)

Select three of the following:

PAD 210 - Introduction to Public Administration 3(3-0)

PAD 211 - Introduction to Nonprofit Leadership 3(3-0)

PHL 410 - Philosophy of Law 3(3-0)

PSC 301 - Law and Policy in Michigan State Government 3(3-0)

PSC 320 - The American Legislative Process 3(3-0)

PSC 360 - Trial Advocacy 3(3-0)

PSC 398 - Special Topics in Political Science 3-9(3-0)

PSC 421 - Constitutional Law: Powers of Government 3(3-0)

PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)

PSC 514 - American Public Policy Making 3(3-0)

PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

PSC 555 - International Law I 3(3-0)

SOC 220 - Introduction to Social and Criminal Justice 3(3-0)

SOC 326 - Inequalities and Justice Processes: Race, Class and Gender 3(3-0)

SOC 524 - Sociology of Law 3(3-0)

**Note:** 3 hours of PSC 398 if selected as an elective.

**Total: 21 semester hours**

## Nonprofit Leadership and Service Minor

*B.A.; B.A.A.; B.S. degrees*

A Nonprofit Leadership and Service minor consists of 21 hours.

### Required Courses (18 hours)

PAD 211 - Introduction to Nonprofit Leadership 3(3-0)  
 PAD 355 - Nonprofit Lobbying Strategies 3(3-0)  
 PAD 399 - CNP Internship for the Nonprofit Sector 1-12(Spec)  
 PAD 412 - Nonprofit Seminar 3(3-0)  
 PAD 521 - Board Governance and Executive Leadership 3(3-0)  
 PAD 523WI - Fundamentals of Grant Writing and Management 3(3-0)

**Note:** 3 hours of PAD 399 are required.

### Other Requirements (3 hours)

Select 3 hours from PAD, PSC, SOC, or SWK courses.

OR CNP-seeking students must take 3 credits of PAD 375 or PAD 376.

PAD 375 - Certified Nonprofit Professional Lab I 1(1-3)

PAD 376 - Certified Nonprofit Professional Lab II 1(1-3)

**Total: 21 semester hours**

## Sociology Minor

*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A grade of C (2.0) or better must be earned in SOC 200, 301, and 350.
2. No more than nine (9) hours of coursework can transfer to the Sociology Minor from another institution.

### Required Courses (13 hours)

SOC 100 - Introductory Sociology 3(3-0)  
 SOC 200 - Introduction to Social Research and Analysis 3(3-0)  
 SOC 250 - Pro-Seminar in Sociology 1(1-0)  
 SOC 301 - Sociological Theory 3(3-0)  
 SOC 350 - Social Research Methodologies 3(3-0)

### Electives I (6 hours)

*Advanced Coursework*

6 additional credit hours of Sociology courses must be taken at the 300-level or above.

### Electives II (3 hours)

One additional course in Sociology must also be taken or up to three hours in Social Work (SWK) may be counted toward a minor in Sociology.

**Total: 22 semester hours**

## Social and Criminal Justice Minor

*B.A., B.A.A., B.S., B.S. in B.A., B.S.W. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. No more than three hours of coursework can be taken on a Credit/No Credit basis for the minor, not including courses that are only offered with this grading option.
2. No more than 15 hours of coursework can transfer to the minor from another institution.

### Core Courses (9 hours)

SOC 100 - Introductory Sociology 3(3-0)  
 SOC 220 - Introduction to Social and Criminal Justice 3(3-0)  
 SOC 326 - Inequalities and Justice Processes: Race, Class and Gender 3(3-0)

### Electives (12 hours)

Select from the following; at least 6 credits selected must be SOC courses:

ANT 341 - Forensic Sciences 3(3-0)  
 ANT 342 - Principles of Forensic Anthropology 3(3-0)  
 PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)  
 PSY 339 - Law and Forensic Psychology 3(3-0)

SOC 222 - Juvenile Delinquency 3(3-0)

SOC 315 - Rape Culture 3(3-0)

SOC 324 - Criminology 3(3-0)

SOC 330 - Social Issues through the Prism of a Prison 3(3-0)

SOC 333 - Government and Corporate Crime 3(3-0)

SOC 365/PSC 365 - Criminal Law 3(3-0)

SOC 397 - Independent Study 1-12(Spec)

SOC 399 - Special Topics in Sociology 1-12(Spec)

SOC 409 - Victimology 3(3-0)

SOC 444 - Human Trafficking 3(3-0)

SOC 515 - Custodial Institutions 3(3-0)

SOC 524 - Sociology of Law 3(3-0)

SOC 526 - Police and Community Relations 3(3-0)

**Note:** 3 hours of SOC 397 or SOC 399 if either course is selected as an elective.

**Total: 21 semester hours**

## Youth Studies Minor

*B.A.; B.S.; B.A.A.; B.S. in B.A., B.S.W. degrees*

Sociological research and theories on middle school and high school aged youth. Explores the creation and recreation of youth as a social category, peer culture, social problems associated with youth, youth in social institutions, the impact of race, class, and gender on youth, and initiatives to promote social change.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students with a major in Sociology or a major in Sociology with a concentration in Social and Criminal Justice may NOT choose this minor.
2. Students with a Social Work major MAY choose this minor.

### Required Courses I (3 hours)

*Introduction*

SOC 100 - Introductory Sociology 3(3-0)

### Required Courses II (6 hours)

*Socialization and Peer Culture Sequence*

SOC 412 - Sociology of Adolescence 3(3-0)

SOC 425 - Sociology of Childhood 3(3-0)

### Electives I (9 hours)

*Institutional Focus*

Select 9 hours from the following:

ANT 200 - Education and Culture 3(3-0)

SOC 215 - Youth, Deviance, and Institutions 3(3-0)

SOC 222 - Juvenile Delinquency 3(3-0)

SOC 311 - Sociology of Education 3(3-0)

SOC 411 - The Family 3(3-0)

SOC 530 - Capstone Experience in Youth Studies 3(3-0)

**Note:** You may choose only one of ANT 200 or SOC 311 and only one of SOC 215 or 222.

**Note:** SOC 530: with permission of instructor.

### Electives II (3 hours)

*Development Course*

Select one of the following:

HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)

HDF 306 - Adolescent Development 3(3-0)

HST 221 - Growing Up in America 3(3-0)

PSY 220 - Developmental Psychology 3(3-0)

PSY 324 - Childhood and Adolescence 3(3-0)

**Total: 21 semester hours**

May include up to three (3) additional hours of prerequisite courses depending on the student's choice of electives.



## Certificates

### Citizen Engagement, Undergraduate Certificate

This 15-credit hour certificate is designed for degree-seeking students in any major and non-degree-seeking students who want to learn how to increase citizen participation in civic and political life and how to facilitate deliberation and democratic-decision-making.

#### Required Courses (9 hours)

PSC 105 - Introduction to American Government and Politics 3(3-0)  
PSC 513 - Citizen Engagement in Public Life 3(3-0)

#### Electives (6 hours)

Select two courses from one of the following categories:

##### Electives 1 - Public Opinion Polling

PSC 280QR - Introduction to Empirical Methods of Political Research 3(3-0)  
PSC 394 - Practicum in Public Polling 1-12(Spec)

**Note:** 3 credits required for PSC 394.

##### Electives 2 - Elected Institutions and Procedures

PSC 261 - State and Local Government 3(3-0)  
PSC 300 - Michigan Politics and Elections 3(3-0)  
PSC 320 - The American Legislative Process 3(3-0)  
PSC 321 - The American Chief Executive 3(3-0)  
PSC 323 - American Parties and Politics 3(3-0)  
PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)  
PSC 326/WGS 326 - Women and Politics 3(3-0)  
PSC 327 - Lobbying and Interest Group Behavior 3(3-0)  
PSC 328 - Campaigns and Elections 3(3-0)

##### Electives 3 - Appointed Institutions and Procedures

PAD 210 - Introduction to Public Administration 3(3-0)  
PAD 313 - Public Budgeting Processes 3(3-0)  
PAD 411 - Public Sector Human Resources 3(3-0)  
PSC 261 - State and Local Government 3(3-0)

**Total: 15 semester hours**

### Global Governance and Advocacy, Undergraduate Certificate

This 15-18 credit hour certificate is designed for students of any major and non-degree students who seek an understanding of significant issues confronting the international community and advocacy strategies to address them.

#### Required Courses (10 hours)

PSC 100 - Introduction to Political Science 3(3-0)  
PSC 150 - Introduction to International Relations 3(3-0)  
PSC 353 - Model United Nations 3(3-0)  
PSC 355 - Model United Nations Lab 1-9(Spec)  
PSC 555 - International Law I 3(3-0)

**Note:** You may count only PSC 100 OR 150, not both.

**Note:** PSC 355 is CR/NC only.

#### Electives (5-8 hours)

Select hours from the following:

PAD 211 - Introduction to Nonprofit Leadership 3(3-0)  
PAD 523WI - Fundamentals of Grant Writing and Management 3(3-0)  
PSC 327 - Lobbying and Interest Group Behavior 3(3-0)  
PSC 354 - Advanced Model United Nations 1-6(1-0)  
PSC 355 - Model United Nations Lab 1-9(Spec)  
PSC 395 - Internship in Government and Politics 1-12(Spec)  
PSC 453 - American Foreign Policy 3(3-0)  
PSC 513 - Citizen Engagement in Public Life 3(3-0)  
PSC 515 - Comparative Public Policy 3(3-0)  
PSC 556 - International Law II 3(3-0)  
PSC 557 - War and Peace Studies 3(3-0)

**Note:** PSC 355 is CR/NC only.

**Total: 15-18 semester hours**

### International Non-Governmental Organization (NGO) Administration, Undergraduate Certificate

This 15-18 credit hour certificate is designed for degree-seeking students in any major and non-degree-seeking students who desire to learn how to promote and manage international Non-Governmental Organizations (NGOs) in order to address the complex challenges confronting the world today.

#### Required Courses (9 hours)

PAD 211 - Introduction to Nonprofit Leadership 3(3-0)  
PAD 413 - Organizational Leadership and Behavior 3(3-0)  
PSC 100 - Introduction to Political Science 3(3-0)  
PSC 150 - Introduction to International Relations 3(3-0)

**Note:** You may count only PSC 100 OR 150, not both.

#### Electives (6-9 hours)

Select hours from the following:

PAD 411 - Public Sector Human Resources 3(3-0)  
PAD 523WI - Fundamentals of Grant Writing and Management 3(3-0)  
PSC 353 - Model United Nations 3(3-0)  
PSC 355 - Model United Nations Lab 1-9(Spec)  
PSC 513 - Citizen Engagement in Public Life 3(3-0)  
PSC 514 - American Public Policy Making 3(3-0)  
PSC 515 - Comparative Public Policy 3(3-0)  
PSC 557 - War and Peace Studies 3(3-0)

**Note:** PSC 355 is CR/NC only.

**Total: 15-18 semester hours**

## International Security Studies, Undergraduate Certificate

This 15-18 credit hour certificate is designed for students of any major and non-degree students seeking an empirical and conceptual understanding of prospective security challenges facing the international community and how member states address them.

Minimum Totals for Graduation: 15 - 18 hours

### Required Courses (12 hours)

PSC 100 - Introduction to Political Science 3(3-0)  
 PSC 150 - Introduction to International Relations 3(3-0)  
 PSC 351 - International Relations 3(3-0)  
 PSC 501 - Bullets not Ballots: Revolution, Insurgency and Civil War 3(3-0)  
 PSC 557 - War and Peace Studies 3(3-0)

**Note:** You may only count one of PSC 100 OR 150, not both.

### Electives (3-6 hours)

Select hours from the following:

PSC 352 - US - Latin American Relations 3(3-0)  
 PSC 353 - Model United Nations 3(3-0)  
 PSC 354 - Advanced Model United Nations 1-6(1-0)  
 PSC 355 - Model United Nations Lab 1-9(Spec)  
 PSC 421 - Constitutional Law: Powers of Government 3(3-0)  
 PSC 453 - American Foreign Policy 3(3-0)  
 PSC 551 - Seminar in International Relations 3(3-0)  
 PSC 555 - International Law I 3(3-0)  
 PSC 556 - International Law II 3(3-0)

**Note:** PSC 355 is CR/NC only.

**Total: 15-18 semester hours**

## Lawmaking and Legal Processes, Undergraduate Certificate

This 15-18 credit hour certificate is designed for degree-seeking students of any major and non-degree-seeking students who desire to understand the ways laws are developed, interpreted and implemented in the United States, along with the skills needed to participate in these processes.

### Required Courses (12 hours)

PSC 105 - Introduction to American Government and Politics 3(3-0)  
 PSC 320 - The American Legislative Process 3(3-0)  
 PSC 321 - The American Chief Executive 3(3-0)  
 PSC 322 - Judicial Process and Politics 3(3-0)

### Electives (3-6 hours)

Select hours from the following:

BLR 202 - Legal Environment of Business 3(3-0)  
 BLR 410 - Regulatory Law 3(3-0)  
 PAD 313 - Public Budgeting Processes 3(3-0)  
 PAD 411 - Public Sector Human Resources 3(3-0)  
 PSC 125 - African-American Politics 3(3-0)  
 PSC 261 - State and Local Government 3(3-0)  
 PSC 301 - Law and Policy in Michigan State Government 3(3-0)  
 PSC 323 - American Parties and Politics 3(3-0)  
 PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)  
 PSC 326/WGS 326 - Women and Politics 3(3-0)  
 PSC 327 - Lobbying and Interest Group Behavior 3(3-0)  
 PSC 328 - Campaigns and Elections 3(3-0)  
 PSC 421 - Constitutional Law: Powers of Government 3(3-0)  
 PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)  
 PSC 453 - American Foreign Policy 3(3-0)  
 PSC 514 - American Public Policy Making 3(3-0)  
 PSC 516 - Environmental Politics and Policy 3(3-0)  
 PSC 520 - American National Government and Politics 3(3-0)  
 PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

**Total: 15-18 semester hours**

## Political Advocacy and Elections, Undergraduate Certificate

This 15-18 credit hour certificate is designed for degree-seeking students of any major and non-degree-seeking students who desire to gain an understanding of significant social and political issues confronting the United States, along with the ability to resolve these issues through advocacy and electoral strategies.

### Required Courses (12 hours)

PSC 101 - Political Behavior 3(3-0)  
 PSC 105 - Introduction to American Government and Politics 3(3-0)  
 PSC 327 - Lobbying and Interest Group Behavior 3(3-0)  
 PSC 328 - Campaigns and Elections 3(3-0)

### Electives (3-6 hours)

Select hours from the following:

COM 365 - Persuasion and Social Influence 3(3-0)  
 COM 527 - Political Communication 3(3-0)  
 PAD 412 - Nonprofit Administration 3(3-0)  
 PSC 300 - Michigan Politics and Elections 3(3-0)  
 PSC 323 - American Parties and Politics 3(3-0)  
 PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)  
 PSC 326/WGS 326 - Women and Politics 3(3-0)  
 PSC 513 - Citizen Engagement in Public Life 3(3-0)  
 PSC 514 - American Public Policy Making 3(3-0)  
 PSC 516 - Environmental Politics and Policy 3(3-0)  
 PSC 583 - Survey Research 3(3-0)

**Total: 15-18 semester hours**

## Public and Social Entrepreneurship, Undergraduate Certificate

This 15-18 credit hour certificate is designed for degree-seeking students of any major and non-degree-seeking students who want to develop and manage public partnerships in order to enhance public value.

### Required Courses (6 hours)

PAD 211 - Introduction to Nonprofit Leadership 3(3-0)  
 PAD 413 - Organizational Leadership and Behavior 3(3-0)

### Electives (9-12 hours)

Select hours from the following:

PAD 313 - Public Budgeting Processes 3(3-0)  
 PAD 523WI - Fundamentals of Grant Writing and Management 3(3-0)  
 PSC 320 - The American Legislative Process 3(3-0)  
 PSC 321 - The American Chief Executive 3(3-0)  
 PSC 322 - Judicial Process and Politics 3(3-0)  
 PSC 323 - American Parties and Politics 3(3-0)  
 PSC 326/WGS 326/PSC 326H - Women and Politics 3(3-0)  
 PSC 327 - Lobbying and Interest Group Behavior 3(3-0)  
 PSC 328 - Campaigns and Elections 3(3-0)  
 PSC 513 - Citizen Engagement in Public Life 3(3-0)  
 PSC 514 - American Public Policy Making 3(3-0)

**Total: 15-18 semester hours**

## Psychology (PSY)

For information, please contact the office, 989-774-3001, 101 Sloan Hall;  
<https://www.cmich.edu/academics/colleges/liberal-arts-social-sciences/departments/psychology>

### Why Study Psychology?

The study of psychology at the undergraduate level will develop your knowledge and understanding of behavior. There are three reasons why this knowledge will be beneficial to you. The first is that you will better understand yourself and your environment. In other words, the study of psychology will enhance your life. The second reason for studying psychology is to acquire skills that will improve your performance in the career of your choice. The third reason for studying psychology at the undergraduate level is to prepare for graduate study in psychology or related fields such as social work or counseling.

The three reasons for studying psychology are reflected in the three basic goals adopted by the Psychology Department. These goals are (a) to help students gain an awareness of the psychological processes operating within themselves and their environment; (b) to develop the technical competence for careers that require knowledge and skills in human development, mental health, behavior analysis, and other psychological areas; and (c) to provide students with a strong foundation in the basic knowledge and skills necessary to pursue graduate study in psychology or related fields.

### Psychology at CMU

In order to achieve the goals listed above, the Psychology Department offers an extensive array of undergraduate course offerings. In addition, the department offers graduate programs leading to the master's degree in applied experimental and industrial-organizational psychology, the specialist degree in school psychology, and the doctoral in philosophy (Ph.D.) in clinical, experimental, industrial-organizational, and school psychology. A more detailed description of the undergraduate program, including required and suggested courses for majors and minors can be found in the Undergraduate Handbook available for viewing and download at the website above. Additional information available for download includes guides regarding additional opportunities at CMU and career possibilities in psychology.

**Advising.** If you are considering a major or minor in psychology, you will need to meet with a faculty advisor. Please call (989-774-3001) or come to the Psychology Department office (Sloan Hall 101) to be assigned a faculty advisor. Next schedule an appointment to meet with your advisor. Make sure to familiarize yourself with all the requirements for the major/minor (listed below) before meeting with your advisor.

To supplement faculty advising, Psi Chi, the International Honors Society in Psychology offers meetings during the academic year dealing with general issues for any student considering a psychology major or minor and describing volunteer opportunities in human service settings in the Mt. Pleasant area. Times and dates of Psi Chi meetings are posted in Sloan Hall.

**Prerequisites.** Course descriptions later in this Bulletin list prerequisites. Recommended courses are not required, but are listed in the course descriptions to provide information on important background materials.

**Board Certified Assistant Behavior Analyst (BCaBA).** The Psychology Department offers a course sequence that meets the educational requirements of the Behavior Analyst Certification Board to become Board Certified Assistant Behavior Analysts (BCABA). Completion of the course sequence listed below, the experience requirements, and passing the BCABA certification exam are required for certification. The Behavior Analyst Certification Board, Inc., has approved the following course sequence as meeting the coursework requirements for eligibility to take the Board Certified Assistant Behavior Analyst Examination: PSY 370, PSY 384, PSY 570, and PSY 586. Students interested in the BCABA course sequence should complete an advisor form at 101 Sloan Hall or contact [BCBA@cmich.edu](mailto:BCBA@cmich.edu).

### The Faculty

Emily Bloesch, Neil Christiansen, Stephen Colarelli, Christopher Davoli, Daniel Drevon, Gary L. Dunbar, James Gerhart, Bryan Gibson, Kyunghee Han, Michael Hixson, Yannick Marchalant, Elizabeth Meadows, Sandra Kanouse Morgan, Larissa Niec, Kimberly O'Brien, Hajime Otani, Kevin Park, Matthew Prewett, Mark Reilly, Katrina Rhymmer, Michael Sandstrom, Kyle Scherr, Reid Skeel, Nathan Weed

## Psychology Major

*B.A.; B.S. degrees*

The Psychology Major is extremely flexible and is appropriate for anyone interested in psychology, regardless of post-graduation plans including graduate school. The Psychology Major requires completion of a minimum of 30 semester hours of PSY courses. Two additional concentrations are available below (Mental Health Psychology and Business Psychology) that each require 36 credit hours.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

- You must complete a minimum of 18 hours of psychology course work at CMU.
- You must earn a grade of C or better in PSY 211QR and PSY 285 to graduate with this major.
- You must earn a grade of "C" or better in PSY 211QR to enroll in PSY 285 and earn a "C" or better in PSY 285 and have completed ENG 201 to enroll in PSY 385. Online courses in PSY 385 are reserved for CMU Online students only. Consult individual course descriptions for prerequisites for other courses. Note: PSY 285 and 385 are offered as WI sections.
- **Credit restrictions:** Only PSY 100 may be taken on a CR/NC basis. No more than 9 hours may be counted from the following courses with unspecified content: PSY 200, PSY 400, PSY 496, PSY 497, PSY 498, PSY 500, PSY 501, PSY 502. Further, not more than 3 hours may be counted from any one unspecified content course.

### Required Courses I (9 hours)

PSY 100 - Introduction to Psychology 3(3-0)  
 PSY 285 - Research Methods 3(3-0)  
 PSY 385 - Applications of Research Methods 3(3-0)

### Required Courses II (3 hours)

PSY 211QR - Introduction to Psychological Statistics 3(3-0)

**Note:** Students who have already taken BIO 500 Biological Statistics (3) or HSC 544 Biostatistics (3) and received a grade of "C" or better in the course may substitute the requirement for PSY 211. In that case, an additional three (3) hours of Psychology must be taken.

### Psychology Electives (18 hours)

Select 18 hours of PSY electives.

**Total: 30 semester hours**

## Psychology Major: Business Psychology Concentration

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

- You must complete a minimum of 18 hours of psychology course work at CMU.
- You must earn a grade of "C" or better in all courses to count toward this concentration. PSY 100 may be taken on a CR/NC basis.
- You must earn a grade of "C" or better in PSY 211QR to enroll in PSY 285 and earn a "C" or better in PSY 285 and have completed ENG 201 to enroll in PSY 385. Online courses in PSY 385 are reserved for CMU Online students only. Consult individual course descriptions for prerequisites for other courses. Note: PSY 285 and PSY 385 are offered as WI sections.
- **Credit restrictions:** Only PSY 100 may be taken on a CR/NC basis. No more than 9 hours may be counted from the following courses with unspecified content: PSY 200, 400, 496, 497, 498, 500, 501, 502. Further, not more than 3 hours may be counted from any one unspecified content course.

### Required Courses I (9 hours)

PSY 100 - Introduction to Psychology 3(3-0)  
 PSY 285 - Research Methods 3(3-0)  
 PSY 385 - Applications of Research Methods 3(3-0)

### Required Courses II (3 hours)

PSY 211QR - Introduction to Psychological Statistics 3(3-0)

**Note:** Students who have already taken BIO 500 Biological Statistics (3) or HSC 544 Biostatistics (3) and received a grade of "C" or better in the course may substitute the requirement for PSY 211. In that case, an additional three (3) hours of Psychology must be taken.

### Required Courses III (9 hours)

PSY 330 - Social Psychology 3(3-0)  
 PSY 336 - Psychology of Work 3(3-0)  
 PSY 337 - Psychology of Advertising 3(3-0)

### Electives I (3 hours)

Select one of the following:

PSY 459 - Stress 3(3-0)  
 PSY 535 - Organizational Psychology 3(3-0)  
 PSY 536 - Personnel Psychology 3(3-0)  
 PSY 538 - Occupational Health Psychology 3(3-0)

### Electives II (6 hours)

Select from the following. The course counted for Electives I may not be counted here.

PSY 310 - Psychological Testing 3(3-0)  
 PSY 340 - Studies in Personality 3(3-0)  
 PSY 379 - Health Psychology 3(3-0)  
 PSY 459 - Stress 3(3-0)  
 PSY 510 - Principles of Psychological Measurement 3(3-0)  
 PSY 511 - Statistics in Psychology 3(3-1)  
 PSY 535 - Organizational Psychology 3(3-0)  
 PSY 536 - Personnel Psychology 3(3-0)  
 PSY 537 - Organizational Behavior Management 3(3-0)  
 PSY 538 - Occupational Health Psychology 3(3-0)  
 PSY 583 - Motivation and Emotion 3(3-0)

### Psychology Electives (6 hours)

Select 6 hours of PSY courses. Courses counted for Electives I or II may not be used here.

**Total: 36 semester hours**



## Psychology Major: Mental Health Concentration

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

- You must complete a minimum of 18 hours of psychology course work at CMU.
- You must earn a grade of "C" or better in all courses to count toward this concentration. PSY 100 may be taken on a CR/NC basis.
- You must earn a grade of "C" or better in PSY 211 QR to enroll in PSY 285 and earn a "C" or better in PSY 285 and have completed ENG 201 to enroll in PSY 385. Online courses in PSY 385 are reserved for CMU Online students only. Consult individual course descriptions for prerequisites for other courses. Note: PSY 285 and PSY 385 are offered as WI sections.
- Credit restrictions:** Only PSY 100 may be taken on a CR/NC basis. No more than 9 hours may be counted from the following courses with unspecified content: PSY 200, 400, 496, 497, 498, 500, 501, 502. Further, not more than 3 hours may be counted from any one unspecified content course.

### Required Courses I (9 hours)

PSY 100 - Introduction to Psychology 3(3-0)

PSY 285 - Research Methods 3(3-0)

PSY 385 - Applications of Research Methods 3(3-0)

### Required Courses II (3 hours)

PSY 211 QR - Introduction to Psychological Statistics 3(3-0)

**Note:** Students who have already taken BIO 500 Biological Statistics (3) or HSC 544 Biostatistics (3) and received a grade of "C" or better in the course may substitute the requirement for PSY 211. In that case, an additional three (3) hours of Psychology must be taken.

### Required Courses III (9 hours)

PSY 250 - Abnormal Psychology 3(3-0)

PSY 310 - Psychological Testing 3(3-0)

PSY 350 - Clinical Interviewing and Counseling 3(3-0)

### Elective I (3 hours)

Select one of the following:

PSY 220 - Developmental Psychology 3(3-0)

PSY 450 - Clinical Psychology 3(3-0)

PSY 459 - Stress 3(3-0)

### Electives II (6 hours)

Select from the following. The course counted for Electives I may not be selected here.

PSY 220 - Developmental Psychology 3(3-0)

PSY 322 - Psychology of Infancy and Early Childhood 3(3-0)

PSY 324 - Childhood and Adolescence 3(3-0)

PSY 325 - Psychology of Aging 3(3-0)

PSY 334/WGS 334 - Psychology of Women 3(3-0)

PSY 340 - Studies in Personality 3(3-0)

PSY 370 - Applied Behavior Analysis 3(3-0)

PSY 379 - Health Psychology 3(3-0)

PSY 450 - Clinical Psychology 3(3-0)

PSY 459 - Stress 3(3-0)

PSY 509 - Behavioral Pharmacology 3(3-0)

PSY 510 - Principles of Psychological Measurement 3(3-0)

PSY 544 - Theories of Personality 3(3-0)

PSY 555 - Psychopathology of Children 3(3-0)

PSY 562 - Therapeutic Intervention: Foundations 3(3-0)

PSY 575/SPE 530 - Autism Spectrum Disorder: Characteristics and Etiology 3(3-0)

PSY 579 - Behavioral Medicine 3(3-0)

PSY 583 - Motivation and Emotion 3(3-0)

PSY 586 - Applied Behavioral Analysis in Education 3(3-0)

### Psychology Electives (6 hours)

Select 6 hours of PSY courses. Courses counted for Electives I or II may not be used here.

**Total: 36 semester hours**

## Psychology Minor

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

### Required Course (3 hours)

PSY 100 - Introduction to Psychology 3(3-0)

### Electives (18 hours)

A student must complete a minimum of 9 hours of psychology course work at CMU. If you are minoring in psychology and plan to attend graduate school in psychology, PSY 211 QR is strongly recommended. The balance of your credits should be selected by you and your advisor working together to select the set of courses that is most appropriate for you.

### Total: 21 semester hours

**Note:** Only 6 hours may be counted from courses of unspecified content: PSY 200, 400, 496, 497, 498, 500, 501, and 502. Further, not more than 3 hours may be counted from any one unspecified content course.

## Interdisciplinary Programs

### Neuroscience Major: Cellular and Molecular Neuroscience Concentration

*B.S. degree*

This is an interdisciplinary major. Please check the index for the page number.

### Neuroscience Major: Clinical Health Neuroscience Concentration

*B.S. degree*

This is an interdisciplinary major. Please check the index for the page number.

### Undergraduate Certificate - Applied Forensic Studies

This is an interdisciplinary certificate. Please see the index for page number.

# College of Science and Engineering «

## David Ford, Ph.D., Dean

Tracy Galarowicz, Ph.D., Associate Dean

Christopher Tycner, Ph.D., Associate Dean

200 Engineering Technology Building; 989-774-1870

<https://www.cmich.edu/academics/colleges/college-science-engineering>

Associated Designators: EES, SAM, SCI

## Introduction

Prepare for an exciting and rewarding career in science, technology, engineering or mathematics! The career outlook for students with degrees in science, mathematics, engineering and technology is outstanding. Graduates of our programs have well-developed skills in thinking analytically and solving problems. They are recruited for high-paying jobs in scientific, technical and administrative positions in industry, consulting services, universities, non-profit research organizations, and government agencies.

Academic programs that stress integrative learning and critical thinking skills distinguish the College of Science and Engineering. Every student has many opportunities to interact with professors, both in and beyond the boundaries of the formal classroom. Whichever program you choose you'll use advanced equipment and work closely with respected teachers and researchers.

Many students enter careers directly after graduating while others continue with advanced study in health-related professional schools or master's and doctoral programs. The College offers several graduate degree programs through CMU Graduate Studies.

## Mission Statement

Our mission is to provide the best possible educational opportunities to prepare students for rewarding and challenging careers in science and engineering.

Our programs help students hone critical thinking and communication skills as they master the fundamental principles of their disciplines. Beyond the classroom we provide opportunities for hands-on participation in research, design projects and internships, and to develop new perspectives by studying abroad.

The research of our faculty advances knowledge with practical outcomes including information for the sustainable management of natural resources and innovations that support industry and economic development in Michigan and beyond.

## Areas of Study

The College of Science and Engineering's two divisions include nine departments and over 200 faculty members. Most fields of study lead to a major or minor, many with choices of emphasis or concentration.

The departments and their primary fields of study are:

### Division of Engineering and Informatics:

- **Computer Science** (Computer Science, Information Technology)
- **Engineering and Technology** (Computer Engineering, Electrical Engineering, Environmental Engineering, Mechanical Engineering, Mechanical Engineering Technology, Industrial Engineering Technology, Product Design Engineering Technology)
- **Statistics, Actuarial and Data Sciences** (Statistics, Actuarial Science)

### Division of Mathematics and Natural Sciences:

- **Biology** (Biomedical, Cellular, and Molecular Biology; Ecology, Evolution and Conservation; Microscopy)
- **Chemistry and Biochemistry** (Chemistry, Biochemistry)
- **Geography and Environmental Studies** (Geography, Geographic Information Science, Environmental and Land Use Planning, Environmental Studies)
- **Earth and Atmospheric Sciences** (Geology, Meteorology, Environmental Science)
- **Mathematics** (Mathematics, including Pure and Applied Mathematics)
- **Physics** (Astronomy and Astrophysics, Physics)
- **Neuroscience** (Interdisciplinary)

Further information about the departments and their programs can be found on the following pages. The staff of the College office can also help you locate the appropriate department and advisor.

### Teacher-Preparation Programs

Majors and minors under the Bachelor of Science in Education degree are offered through the departments and as interdisciplinary programs in Integrated Science and Earth Science. If you are interested in teacher certification, consult both the specific department or program of choice and the sections on teacher certification in this Bulletin. Information about CMU's STEM Scholars program for students preparing to be mathematics or science teachers may be found at <https://www.cmich.edu/stemed/STEMEdScholars/Pages/default.aspx>.

**Pre-Professional Studies**

Medical and dental schools as well as other health-related professional schools value an undergraduate degree in one of the natural or mathematical sciences as excellent pre-professional training. All professional schools require certain basic preparatory work for acceptance. The College of Science and Engineering can provide much of that preparation. See the index of this Bulletin for information on pre-professional studies offered at CMU.

**Accelerated and Combined Programs**

Several departments offer programs in a time-shortened format. For example, with proper advising and planning, a student can complete the major in Physics in three years. In addition, some departments offer accelerated master's programs that allow a student to complete both bachelor's and master's degrees in five years. Check with a department advisor about such options.

**Science and Engineering Student Success Center**

Need help deciding on a major, selecting courses, finding a tutor, choosing a study-abroad program, finding an internship or identifying your ideal career? The College of Science and Engineering Student Success Center offers academic advising, academic assistance and career services for students interested in science, mathematics, engineering and technology programs including teacher preparation and pre-health-professions. For more information contact the CS&E Director of Student Services, Heidi Mahon, at 989-774-7506 or [h.k.mahon@cmich.edu](mailto:h.k.mahon@cmich.edu).

**Undergraduate Research, Internships, and Study Abroad**

Independent research and career-related work experiences are important opportunities that you are encouraged to take advantage of whenever possible. Options include department-sponsored field studies, academic research, design projects, internships and summer employment. In addition, many departments offer study-abroad programs such as the Galápagos semester through the Universidad San Francisco de Quito, Ecuador; computer science and engineering at the Waterford Institute of Technology, Ireland; or chemistry, biochemistry and geology at Stellenbosch University in South Africa. See your major or minor advisor to develop a plan of study that balances your course load with appropriate activities.

**Science and Engineering Residential College**

The College of Science and Engineering and the Office of Residence Life offer students the opportunity to participate in a living-learning community with a focus on science, engineering, technology, and mathematics. Activities emphasize academics and making connections with your discipline. Contact the College or the Office of Residence Life (989-774-3111) for further information or visit the website <https://www.cmich.edu/colleges/se/Pages/SERC.aspx>.

**Student Organizations**

In addition to university-wide extracurricular activities and honors organizations, the College supports many student chapters of professional organizations, honors societies, and service clubs. These organizations provide opportunities to understand the nature of a profession or the role of a professional society. Participation will help you prepare for a career and begin networking with other students, faculty, and working professionals. Information about activities and organizations is available in department offices.

**Facilities**

The College departments occupy five buildings: Biosciences, Brooks, Dow, Engineering Technology, and Pearce Hall, which provide spaces for student collaboration as well as well-equipped classrooms and teaching laboratories. College facilities also include the CMU Biological Station on Beaver Island in northern Lake Michigan.

Modern research facilities are available to students in each department. These include a wide variety of highly-specialized laboratories ranging from nuclear magnetic resonance spectroscopy to robotics and automation to DNA sequencing and analysis. These laboratories are routinely utilized by undergraduate students taking part in research programs.

## Biology

(BIO, MAR)

For information, contact the chair, 989-774-1865, Biosciences 2100;

<https://www.cmich.edu/academics/colleges/college-science-engineering/departments-schools/biology>

### Why Study Biology?

Biology is the science of life. Humans share life on Earth with up to 30 million other living forms, all of which belong to one complex and fragile ecosystem. The study of biology prepares students to understand this complex ecosystem and our interactions with it. Biology is for those who are curious about living things and wish to learn scientific methods for observing and evaluating life processes. The students may eventually be involved in social and political decisions requiring biological understanding, as well as furthering scientific knowledge through occupations dealing with biological research, natural resource management, agriculture, human health, education and other endeavors. Undergraduate training in biology is good preparation for advanced study in subdisciplines of biology such as medicine, environmental science, physiology, microbiology, molecular biology, aquatic biology, conservation biology, ecology, animal behavior, and other areas of zoology and botany.

### Biology at CMU

The Department of Biology at CMU offers programs that provide a core of instruction, followed by an opportunity to study in a more specialized area of biology. The department offers service courses in introductory and human biology, nature study, and conservation of natural resources for non-science students. The major and minor in biology can be applied to a variety of programs designed to serve career interests of students in elementary and secondary teaching, data analytics, natural resources, medical technology, pre-medicine, pre-osteopathy, and pre-veterinary, as well as a program to prepare students for graduate studies in the biological sciences. Graduate programs include Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees emphasizing thesis research, as well as a non-thesis Master of Science (M.S.) degree. Requirements for the graduate programs are detailed in the *Graduate Studies Bulletin*. In addition to state-of-the-art laboratories, the Department of Biology operates excellent field and laboratory facilities at *Neithercut Woodland* in Farwell, Michigan and at the *CMU Biological Station on Beaver Island*. Several core biology courses as well as electives are offered during summer sessions at the CMU Biological Station on Beaver Island. Students participate in research and field experiences in a variety of natural habitats while residing in modern facilities along the beautiful shores of Lake Michigan. Visit <https://www.cmich.edu/academics/colleges/college-science-engineering/centers/cmu-biological-station> for more information.

### Notes:

It is essential that students interested in biology contact a member of the Department of Biology during the first year at CMU. Courses must be selected in consultation with and approved by a departmental advisor. Students may make individual arrangements with instructors for honors work. Generally, the biology programs require extensive laboratory experiences in which the students use specialized equipment (including microscopes), chemicals and glassware. Students are also required to work with cultures of microorganisms and to maintain aseptic conditions. The required field experiences will introduce students to a variety of habitats, including woodlots, fields, streams, lakes and marshes. Courses requiring field trips will have expenses prorated among class members.

The Integrated Science major and the Neuroscience majors are found in the Bulletin section on Interdisciplinary Majors and Minors.

Biology credit earned on a Credit/No Credit basis does not apply on majors and minors authorized by the Department of Biology.

### The Faculty

Elizabeth Alm, David Alm, Hunter Carrick, Gregory Colores, Cynthia Damer, Joanne Dannenhoffer, Peter Dijkstra, Tracy Galarowicz, Thomas Gehring, Steven Gorsich (Chair), Philip Hertzler, Stephen Juris, Xantha Karp, Jon Kelty, Peter Kourtev, Deric Learman, Debra Linton, Eric Linton, Andrew Mahon, A. Scott McNaught, Anna Monfils, Kirsten Nicholson, Kevin Pangle, Wiline Pangle, Lori Reyna, Shasta Sabo, Jennifer Schisa, Nancy Seefelt, Michelle Steinhilb, Bradley Swanson, Don Uzarski, Rebecca Uzarski, Daelyn Woolnough, David Zanatta



## Non-Teaching Majors and Minors

### Biology Major: Ecology, Evolution, and Conservation Concentration

B.A., B.S. degrees

The Biology Major will prepare students for graduate programs, pre-professional programs, certificate programs, and careers in diverse biological disciplines. Experiences in the program will strengthen skills in teamwork, inquiry and analysis, oral and written communication, problem solving, ethical reasoning, critical and creative thinking, and quantitative and information literacy. Biology students have the opportunity to perform one-on-one research with Biology faculty members and often present their work at local, regional, national, or international venues. To support student success, the Biology department offers numerous scholarship opportunities, granting greater than \$60K in awards annually. Biology students are part of a learning community that includes local networking opportunities (registered student organizations and clubs), state and regional collaborations and partnerships (e.g., government agencies, tribal organizations), and global experiences (study abroad opportunities).

The Ecology, Evolution and Conservation Biology Concentration is designed to prepare students for a variety of careers in disciplines such as plant and animal biology, fisheries, wildlife biology, animal behavior, limnology, Great Lakes biology, systematics, and climate change biology. Coursework in this major allows students to learn practical skills in field sampling techniques, GIS analysis, wildlife management, advanced statistical analysis, specimen curation, and taxonomy. Students that complete this major receive excellent preparation to pursue advanced degrees (e.g., MS, PhD) and/or obtain employment in: state and federal agencies (e.g., MDNR, USGS, USFWS); tribal agencies; non-profit organizations (e.g., The Nature Conservancy); private sector/consulting companies; academia; museums; zoological parks; and natural history collections.

Extensive hands-on learning opportunities, supported by state-of-the-art teaching, field, and laboratory facilities, will empower students to apply their undergraduate education for employment or graduate/professional training.

#### Core Courses I (20 hours)

BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 BIO 112 - Foundations of Cell Biology 4(3-3)  
 BIO 211 - Foundations of Genetics 4(3-3)  
 BIO 212 - Foundations of Form and Function 4(3-3)  
 BIO 213 - Foundations of Ecology 4(3-3)

#### Core Courses II (3 hours)

BIO 500 - Biological Statistics 3(2-2)

#### Required Courses (9-12 hours)

Select courses from categories I, II, and III below in consultation with a Biology advisor. Courses may not double count toward Required Courses I, II, and III and Electives. At least 2 courses from Required Courses I, II, III and Electives must be at the 400-level or higher. At least 2 courses from Required Courses I, II, III and Electives must have laboratory hours.

##### Required Courses I (3-4 hours)

Select one Ecology course from the following:

BIO 367 - Introduction to Marine Sciences 3(3-0)  
 BIO 440 - Wildlife Ecology 3(3-0)  
 BIO 518 - Animal Behavior 4(3-3)  
 BIO 519 - Invertebrate Diversity 4(2-4)  
 BIO 520 - Great Lakes Mollusks 2(1-3)  
 BIO 525 - Plant Ecology 3(2-3)  
 BIO 526 - Limnology 3(3-0)  
 BIO 527 - Limnological Methods 2(0-4)  
 BIO 555 - Great Lakes Wetland and Aquatic Plants 4(2-4)  
 BIO 560 - Avian Ecology 3(2-3)  
 BIO 561 - Wetland Ecology and Management 3(3-0)  
 BIO 567WI - Biogeochemistry 3(3-0)

**Note:** Students who choose BIO 527 will also have to take the pre/co-requisite course BIO 526.

#### Required Courses II (3-4 hours)

Select one Evolution course from the following:

BIO 306 - Natural History of Vertebrates 3(2-3)  
 BIO 390 - Comparative Animal Physiology 4(3-3)  
 BIO 501 - Evolution 3(3-0)  
 BIO 509 - Ichthyology 4(3-3)  
 BIO 511 - Aquatic Insects 3(1-4)  
 BIO 515 - Ornithology 4(2-4)  
 BIO 519 - Invertebrate Diversity 4(2-4)  
 BIO 523 - Ecology and Systematics of Freshwater Algae 3(2-3)  
 BIO 540 - Mammalogy 4(3-3)  
 BIO 549 - Herpetology 3(2-3)  
 BIO 557 - Woody Plants of Michigan 4(2-4)  
 BIO 562 - Plant Systematics and Evolution 4(3-3)  
 BIO 565 - Microbial Diversity and Physiology 3(3-0)  
 BIO 566 - Microbial Diversity and Physiology Laboratory 1(0-3)  
 BIO 575 - Applied Bioinformatics 4(3-3)

**Note:** Students who choose BIO 566 will also have to take the pre/co-requisite course BIO 565.

#### Required Courses III (3-4 hours)

Select one Conservation course from the following:

BIO 321WI - Introduction to Conservation Biology 3(3-0)  
 BIO 322WI - Freshwater Conservation 3(2-2)  
 BIO 365 - Environmental Contaminants 3(3-0)  
 BIO 366 - Freshwater Biology 3(2-3)  
 BIO 510 - Fisheries Biology and Management 4(3-3)  
 BIO 541 - Wildlife Biology and Management 4(2-4)  
 BIO 561 - Wetland Ecology and Management 3(3-0)  
 BIO 585 - Conservation Medicine 3(3-0)

#### Other Requirements I (16 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 MTH 130 - Pre-Calculus Mathematics 4(4-0)  
 MTH 132 - Calculus I 4(4-0)  
 PHY 130QR - College Physics I 4(4-0)

**Note:** You may only count one of MTH 130 or 132, not both.

#### Other Requirements II (7-14 hours)

Select two of the following options:

##### Option A (4-8 hours)

Select CHM 342 for 4 hours; OR CHM 345, CHM 346, and CHM 349 for 8 hours; OR CHM 343, CHM 348, and CHM 349 for 8 hours:  
 CHM 342 - Survey of Organic Chemistry 4(3-3)  
 CHM 343 - Organic Chemistry I: Foundations 4(4-0)  
 CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)  
 CHM 348 - Organic Chemistry II: Bioorganic 2(2-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)

##### Option B (3 hours)

Select one of the following:

CHM 421 - Survey of Biochemistry 3(3-0)  
 CHM 520 - Introductory Biochemistry 3(3-0)

##### Option C (6 hours)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)  
 GEO 303 - Geographic Information Systems 3(2-2)

##### Option D (4 hours)

Select MTH 132 for 4 hours OR MTH 133 for 4 hours OR DAS 150QR and DAS 252 for 4 hours.  
 DAS 150QR - Introduction to Data Science 3(2-2)  
 DAS 252 - Data Visualization and Programming using R/RStudio 1(1-1)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)

##### Option E (4 hours)

PHY 131 - College Physics II 4(4-0)

**Notes:** Students selecting Option B must also select Option A. Students who have taken MTH 132 to fulfill *Other Requirements I* may not select Option D.

**Other Requirements III (0 hours)**

*Capstone Exit Exam and Survey.*

This capstone experience may include taking the Biology Major Field Test, analyzing and interpreting data, and/or completing an exit survey.

**Electives (9 hours)**

Select advanced level elective courses from the following in consultation with a Biology advisor. Courses selected in Required Courses I, II, or III may not count toward elective credit. At least 2 courses from Required Courses I, II, III and Electives must be at the 400-level or higher. At least 2 courses from Required Courses I, II, III and Electives must have laboratory hours.

BIO 306 - Natural History of Vertebrates 3(2-3)  
 BIO 320 - Biology of Microorganisms 4(3-3)  
 BIO 321WI - Introduction to Conservation Biology 3(3-0)  
 BIO 322WI - Freshwater Conservation 3(2-2)  
 BIO 334/GEO 334 - Soil Science 3(2-2)  
 BIO 337 - Comparative Vertebrate Anatomy 4(3-3)  
 BIO 365 - Environmental Contaminants 3(3-0)  
 BIO 366 - Freshwater Biology 3(2-3)  
 BIO 367 - Introduction to Marine Sciences 3(3-0)  
 BIO 390 - Comparative Animal Physiology 4(3-3)  
 BIO 391 - Plant Physiology 4(3-3)  
 BIO 397 - Special Topics in Biology 1-6(Spec)  
 BIO 403WI - Undergraduate Research 3-4(Spec)  
 BIO 435 - Environmental Toxicology 3(3-0)  
 BIO 440 - Wildlife Ecology 3(3-0)  
 BIO 495 - Undergraduate Internship in Biology 1-4(Spec)  
 BIO 497 - Special Topics in Biology 1-9(Spec)  
 BIO 501 - Evolution 3(3-0)  
 BIO 509 - Ichthyology 4(3-3)  
 BIO 510 - Fisheries Biology and Management 4(3-3)  
 BIO 511 - Aquatic Insects 3(1-4)  
 BIO 515 - Ornithology 4(2-4)  
 BIO 518 - Animal Behavior 4(3-3)  
 BIO 519 - Invertebrate Diversity 4(2-4)  
 BIO 520 - Great Lakes Mollusks 2(1-3)  
 BIO 523 - Ecology and Systematics of Freshwater Algae 3(2-3)  
 BIO 525 - Plant Ecology 3(2-3)  
 BIO 526 - Limnology 3(3-0)  
 BIO 527 - Limnological Methods 2(0-4)  
 BIO 540 - Mammalogy 4(3-3)  
 BIO 541 - Wildlife Biology and Management 4(2-4)  
 BIO 549 - Herpetology 3(2-3)  
 BIO 555 - Great Lakes Wetland and Aquatic Plants 4(2-4)  
 BIO 557 - Woody Plants of Michigan 4(2-4)  
 BIO 560 - Avian Ecology 3(2-3)  
 BIO 561 - Wetland Ecology and Management 3(3-0)  
 BIO 562 - Plant Systematics and Evolution 4(3-3)  
 BIO 565 - Microbial Diversity and Physiology 3(3-0)  
 BIO 566 - Microbial Diversity and Physiology Laboratory 1(0-3)  
 BIO 567WI - Biogeochemistry 3(3-0)  
 BIO 573 - Applied Genomics 3(3-0)  
 BIO 575 - Applied Bioinformatics 4(3-3)  
 BIO 585 - Conservation Medicine 3(3-0)  
 BIO 597 - Special Topics in Biology 1-9(Spec)

**Notes:** Credit toward the Biology Major may only be earned in BIO 397, 497, and 597 with permission of advisor. Students who choose BIO 566 will also have to take the pre/co-requisite course BIO 565. Students who choose BIO 527 will also have to take the pre/co-requisite course BIO 526.

**Total: 64-74 semester hours**

**Biology Major: Biomedical, Cellular, and Molecular Concentration**

The Biology Major will prepare students for graduate programs, pre-professional programs, certificate programs, and careers in diverse biological disciplines. Experiences in the program will strengthen skills in teamwork, inquiry and analysis, oral and written communication, problem solving, ethical reasoning, critical and creative thinking, and quantitative and information literacy. Biology students have the opportunity to perform one-on-one research with Biology faculty members and often present their work at local, regional, national, or international venues. To support student success, the Biology department offers numerous scholarship opportunities, granting greater than \$60K in awards annually. Biology students are part of a learning community that includes local networking opportunities (registered student organizations and clubs), state and regional collaborations and partnerships (e.g., government agencies, tribal organizations), and global experiences (study abroad opportunities).

The Biomedical, Cellular, and Molecular (BCM) Concentration will prepare students for graduate programs (MS or PhD), health professions programs, and careers in laboratory or research-based settings with universities, state or national science-based agencies, and pharmaceutical or industrial companies. The courses that comprise the BCM concentration prepare students to be competitive applicants for the following professional programs: medical school (MD and DO); physician assistant (PA); dental school (DDS); veterinary medicine (DVM); pharmacy (PharmD); optometry (OD); physical therapy (DPT); occupational therapy (OTD); podiatric school (DPM); chiropractic school (DC); and other health care careers.

Students can explore areas in biomedicine, physiology, public health, microbiology, genetics, and cellular, molecular, and developmental biology. In addition to fundamental laboratory skills, students have the opportunity to learn advanced techniques including molecular cloning, protein and nucleic acid analysis, cell culture, and genomic analysis. Extensive hands-on learning opportunities, supported by state-of-the-art teaching and research laboratories, will empower students to apply their undergraduate education for employment or graduate/professional training.

**Core Courses I (20 hours)**

BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 BIO 112 - Foundations of Cell Biology 4(3-3)  
 BIO 211 - Foundations of Genetics 4(3-3)  
 BIO 212 - Foundations of Form and Function 4(3-3)  
 BIO 213 - Foundations of Ecology 4(3-3)

**Core Courses II (3 hours)**

BIO 500 - Biological Statistics 3(2-2)

**Required Courses (3-4 hours)**

Select one of the following:

BIO 320 - Biology of Microorganisms 4(3-3)  
 BIO 324 - Eukaryotic Cell Biology 3(3-0)  
 BIO 390 - Comparative Animal Physiology 4(3-3)  
 BIO 391 - Plant Physiology 4(3-3)  
 BIO 392 - Mammalian Physiology 4(3-3)

**Other Requirements I (20 hours)**

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 MTH 130 - Pre-Calculus Mathematics 4(4-0)  
 MTH 132 - Calculus I 4(4-0)  
 PHY 130QR - College Physics I 4(4-0)  
 PHY 131 - College Physics II 4(4-0)

**Note:** You may only count one of MTH 130 or 132, not both.

**Other Requirements II (4-8 hours)**

Select one of the following options:

**Option A (4 hours)**

CHM 342 - Survey of Organic Chemistry 4(3-3)

(continued)

**Option B (8 hours)**

- CHM 345 - Organic Chemistry I 3(3-0)
- CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)

**Option C (8 hours)**

- CHM 343 - Organic Chemistry I: Foundations 4(4-0)
- CHM 348 - Organic Chemistry II: Bioorganic 2(2-0)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)

**Notes:** Students selecting Option A in Other Requirements II must select Option A in Other Requirements III. Students selecting Option B or C in Other Requirements II may select any option in Other Requirements III.

**Other Requirements III (3-6 hours)**

Select one of the following options:

**Option A (3 hours)**

- CHM 421 - Survey of Biochemistry 3(3-0)

**Option B (3 hours)**

- CHM 520 - Introductory Biochemistry 3(3-0)

**Option C (6 hours)**

- CHM 521 - Biochemistry I 3(3-0)
- CHM 522 - Biochemistry II 3(3-0)

**Other Requirements IV (0 hours)**

*Capstone Exit Exam and Survey*

This capstone experience may include taking the Biology Major Field Test, analyzing and interpreting data, and/or completing an exit survey.

**Electives (10 hours)**

Select advanced level elective courses from the list below. Courses selected in Required Courses may not also be used as electives. At least six credits must be at the 400-level or higher. At least one elective must be a BIO course with laboratory hours. (Laboratory courses include BIO 320, BIO 325, BIO 330, BIO 337, BIO 390, BIO 391, BIO 392, BIO 403WI, BIO 536, BIO 544, BIO 546, BIO 550, BIO 552, BIO 553, BIO 566, 576WI; BIO 570 only counts as a lab course when offered for 4 credits).

- BIO 320 - Biology of Microorganisms 4(3-3)
- BIO 324 - Eukaryotic Cell Biology 3(3-0)
- BIO 325 - Biotechnology 3(1-5)
- BIO 330 - Light Microscopy 3(2-2)
- BIO 337 - Comparative Vertebrate Anatomy 4(3-3)
- BIO 365 - Environmental Contaminants 3(3-0)
- BIO 390 - Comparative Animal Physiology 4(3-3)
- BIO 391 - Plant Physiology 4(3-3)
- BIO 392 - Mammalian Physiology 4(3-3)
- BIO 397 - Special Topics in Biology 1-6(Spec)
- BIO 403WI - Undergraduate Research 3-4(Spec)
- BIO 435 - Environmental Toxicology 3(3-0)
- BIO 487/PSY 487 - Recent Advances in Neuroscience Seminar 2(2-0)
- BIO 490 - Biomedical Sciences Seminar 1-3(Spec)
- BIO 495 - Undergraduate Internship in Biology 1-4(Spec)
- BIO 497 - Special Topics in Biology 1-9(Spec)
- BIO 501 - Evolution 3(3-0)
- BIO 524 - Molecular Biology 3(3-0)
- BIO 534 - Endocrinology 3(3-0)
- BIO 536 - Histology 3(2-3)
- BIO 537 - Immunology 3(3-0)
- BIO 539 - Virology 3(3-0)
- BIO 544 - Developmental Biology 4(3-3)
- BIO 545 - Molecular Genetics 3(3-0)
- BIO 546 - Molecular Genetics Laboratory 1(0-3)
- BIO 550 - Transmission Electron Microscopy 4(1-6)
- BIO 552 - Scanning Electron Microscopy 4(3-3)
- BIO 553 - Confocal Microscopy 3(2-3)
- BIO 565 - Microbial Diversity and Physiology 3(3-0)
- BIO 566 - Microbial Diversity and Physiology Laboratory 1(0-3)
- BIO 567WI - Biogeochemistry 3(3-0)
- BIO 570 - Medical Cell Biology 3-4(Spec)
- BIO 572 - Epigenetics 3(3-0)
- BIO 573 - Applied Genomics 3(3-0)
- BIO 575 - Applied Bioinformatics 4(3-3)

- BIO 576WI - Mammalian Cell Culture 3(1-5)
- BIO 580 - Medical Microbiology 3(1-5)
- BIO 585 - Conservation Medicine 3(3-0)
- BIO 590 - Cardiovascular Physiology 3(3-0)
- BIO 591 - Neurophysiology 3(3-0)
- BIO 592 - Developmental Neurobiology 3-4(Spec)
- BIO 595 - Cancer Biology 3(3-0)
- BIO 597 - Special Topics in Biology 1-9(Spec)

**Notes:**

Credit toward the Biology major may only be earned in BIO 397, BIO 497, and BIO 597 with permission of advisor.

Students who choose BIO 546 or BIO 566 must also take the appropriate pre/co-requisite lecture course.

**Total: 63-71 semester hours**

**Biology Major: Microscopy Concentration**

*B.A., B.S. degrees*

The Biology Major will prepare students for graduate programs, pre-professional programs, certificate programs, and careers in diverse biological disciplines. Experiences in the program will strengthen skills in teamwork, inquiry and analysis, oral and written communication, problem solving, ethical reasoning, critical and creative thinking, and quantitative and information literacy. Biology students have the opportunity to perform one-on-one research with Biology faculty members and often present their work at local, regional, national, or international venues. To support student success, the Biology department offers numerous scholarship opportunities, granting greater than \$60K in awards annually. Biology students are part of a learning community that includes local networking opportunities (registered student organizations and clubs), state and regional collaborations and partnerships (e.g., government agencies, tribal organizations), and global experiences (study abroad opportunities).

The Microscopy concentration is designed for students who are interested in a career as a biological microscopist. In addition to fundamental laboratory skills, students will gain experience in sample preparation and image analysis techniques and master advanced microscopy techniques including scanning and transmission electron microscopy, confocal microscopy, and light microscopy. Students that complete this major receive excellent preparation to pursue advanced degrees (e.g., MS, PhD) and/or obtain employment in: research laboratories; hospitals; pharmaceutical companies; chemical companies; food processing laboratories; and forensic laboratories.

Extensive hands-on learning opportunities, supported by state-of-the-art teaching, laboratory and microscopy facilities, will empower students to apply their undergraduate education for employment or graduate/professional training.

**Core Courses I (20 hours)**

- BIO 111 - Foundations of Evolution and Diversity 4(3-3)
- BIO 112 - Foundations of Cell Biology 4(3-3)
- BIO 211 - Foundations of Genetics 4(3-3)
- BIO 212 - Foundations of Form and Function 4(3-3)
- BIO 213 - Foundations of Ecology 4(3-3)

**Core Courses II (17-18 hours)**

- BIO 330 - Light Microscopy 3(2-2)
- BIO 403WI - Undergraduate Research 3-4(Spec)
- BIO 550 - Transmission Electron Microscopy 4(1-6)
- BIO 552 - Scanning Electron Microscope Technique 4(3-3)
- BIO 553 - Confocal Microscopy 3(2-3)

**Required Courses (3 hours)**

Select one of the following:

- BIO 325 - Biotechnology 3(1-5)
- BIO 500 - Biological Statistics 3(2-2)
- BIO 536 - Histology 3(2-3)



**Other Requirements I (20 hours)**

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 MTH 130 - Pre-Calculus Mathematics 4(4-0)  
 MTH 132 - Calculus I 4(4-0)  
 PHY 130QR - College Physics I 4(4-0)  
 PHY 131 - College Physics II 4(4-0)

**Note:** You may only count one of MTH 130 OR 132, not both.

**Other Requirements II (4-8 hours)**

Select one of the following options:

**Option A (4 hours)**

CHM 342 - Survey of Organic Chemistry 4(3-3)

**Option B (8 hours)**

CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)

**Option C (8 hours)**

CHM 343 - Organic Chemistry I: Foundations 4(4-0)  
 CHM 348 - Organic Chemistry II: Bioorganic 2(2-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)

**Note:** Students selecting Option A in Other Requirements II must select Option A in Other Requirements III. Students selecting Option B in Other Requirements II may select any option in Other Requirements III.

**Other Requirements III (3-6 hours)**

Select one of the following options:

**Option A (3 hours)**

CHM 421 - Survey of Biochemistry 3(3-0)

**Option B (3 hours)**

CHM 520 - Introductory Biochemistry 3(3-0)

**Option C (6 hours)**

CHM 521 - Biochemistry I 3(3-0)  
 CHM 522 - Biochemistry II 3(3-0)

**Other Requirements IV (0 hours)**

*Capstone Exit Exam and Survey*

This capstone experience may include taking the Biology Major Field Test, analyzing and interpreting data, and/or completing an exit survey.

**Total: 67-75 semester hours**

**Biology Minor**

*B.A., B.A.A., B.S. degrees*

**Required Courses I (20 hours)**

BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 BIO 112 - Foundations of Cell Biology 4(3-3)  
 BIO 211 - Foundations of Genetics 4(3-3)  
 BIO 212 - Foundations of Form and Function 4(3-3)  
 BIO 213 - Foundations of Ecology 4(3-3)

**Required Courses II (8 hours)**

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)

**Total: 28 semester hours**

**Biological Analytics Minor**

*B.A., B.A.A., B.S. degrees*

The Biological Analytics minor prepares students for data driven careers by integrating the biological and data sciences.

**Required Courses I - Data Science (13 hours)**

DAS 150QR - Introduction to Data Science 3(2-2)  
 DAS 251 - Data Visualizations and Programming using Tableau 1(1-1)  
 DAS 252 - Data Visualization and Programming using R/RStudio 1(1-1)  
 DAS 253 - Data Visualization and Programming using SAS 1(1-1)  
 DAS 260 - Data Integrity and Ethics 1(1-0)  
 DAS 350 - Exploratory Data Analytics 3(2-2)  
 DAS 450 - Applied Analytics I 3(3-1)

**Required Courses II - Biology (4 hours)**

BIO 111 - Foundations of Evolution and Diversity 4(3-3)

**Required Courses III - Genetics and Statistics (6-7 hours)**

Select one of the following options:

**Option 1 - Biology Majors (7 hours)**

BIO 211 - Foundations of Genetics 4(3-3)  
 BIO 500 - Biological Statistics 3(2-2)

**Note:** BIO 211 requires BIO 111 and BIO 112 as it is part of the foundational core sequence taken by all Biology Majors.

**Option 2 - Data Science Majors (6 hours)**

BIO 315 - Human Genetics 3(3-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

**Electives (3-4 hours)**

Select one of the following:

BIO 573 - Applied Genomics 3(3-0)  
 BIO 575 - Applied Bioinformatics 4(3-3)

**Total: 26-28 semester hours**

**Science Minor**

*B.A.; B.S.; B.S. in B.A. degree*

This minor satisfies the science requirement for the Dietetics major and is administered by the Department of Biology. This minor may not be used with majors in Biology, Biochemistry, or Neuroscience.

**Required Courses I (3-8 hours)**

Select one of the following options:

**Option A (3 hours)**

BIO 101 - General Biology 3(2-2)

**Option B (3 hours)**

BIO 105QR - Introductory Quantitative Biology 3(2-2)

**Option C (8 hours)**

BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 BIO 112 - Foundations of Cell Biology 4(3-3)

**Required Courses II (8 hours)**

BIO 208 - Microbiology 4(3-3)  
 BIO 392 - Mammalian Physiology 4(3-3)

**Required Courses III (12-19 hours)**

Select one of the following options:

**Option A (12 hours)**

CHM 120 - Survey of Chemistry 4(4-0)  
 CHM 127 - Introductory Chemistry Laboratory 1(0-2)  
 CHM 342 - Survey of Organic Chemistry 4(3-3)  
 CHM 421 - Survey of Biochemistry 3(3-0)

**Option B (19 hours)**

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)  
 CHM 520 - Introductory Biochemistry 3(3-0)

**Note:** CHM 521 and 522 can substitute for CHM 520.

**Option C (15 hours)**

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 CHM 342 - Survey of Organic Chemistry 4(3-3)  
 CHM 421 - Survey of Biochemistry 3(3-0)

**Total: 23-35 semester hours**

**Interdisciplinary Majors****Integrated Science Major**

*B.S. in Ed. degree, Secondary Standard Certificate*

**Neuroscience Major**

*B.S. degree*

*See the Index for page numbers.*



## Chemistry and Biochemistry (CHM)

For information, please contact the chairperson, 989-774-3981, 268 Dow Science Complex;  
<https://www.cmich.edu/academics/colleges/college-science-engineering/departments-schools/chemistry-and-biochemistry>

### Why Study Chemistry and Biochemistry?

Chemistry plays an incredibly important role in our everyday lives. Biochemistry applies chemical principles to the study of living systems. Studying chemistry and biochemistry equips students with fundamental knowledge to better understand the natural world and the impact of the chemical sciences on modern society. Research training in the chemistry and biochemistry field also provides students with essential skills to improve the quality of human life.

An undergraduate major or minor in Chemistry or Biochemistry will give you an excellent foundation to apply for and succeed in:

- professional programs in medicine, allied health sciences, dentistry, veterinary medicine, pharmacy, optometry;
- graduate work in chemistry and biochemistry;
- graduate work in a related area such as pharmacology, polymer science, materials science, chemical engineering, molecular biology, biomedical science;
- industrial chemistry positions in research and development;
- technical services, chemical marketing, technical writing, patent preparation, product formulation, quality assurance, analysis;
- teaching chemistry or other STEM subjects.

### Chemistry and Biochemistry at CMU

To enable students to tailor their studies to their academic interest and career goals in all of the above areas, the Department of Chemistry and Biochemistry offers several majors and concentrations. All of the Majors are either approved by the American Chemical Society (ACS) or accredited by the American Society for Biochemistry and Molecular Biology (ASBMB).

- **Chemistry Major, Materials Concentration** is geared toward students who are interested in the development and applications of polymers and nanoscale structures;
- **Chemistry Major, Environmental Concentration** is geared toward students who are interested in the impact of chemical science on the environment;
- **Chemistry Major, Chemical Technology Concentration** is geared towards students who are interested in developing the skills to work in the chemical, pharmaceutical, biotechnological, and related industries;
- **Chemistry Major, General Chemistry Concentration** that is geared toward students who are interested in maximum flexibility for their program of study;
- **Biochemistry Major** is geared toward students who are interested in studying the chemistry of life and is excellent preparation for students interested in medicine and allied health professions, pharmacy, and graduate programs in biochemistry and biomedical sciences (pharmacology, physiology, microbiology) and affords students important skills for jobs in biotechnology and pharmaceutical industries.

All Chemistry Majors, regardless of concentration, start with the same foundational and core courses (analytical, biochemistry, inorganic, organic, physical), then specialize with advanced courses tailored to their concentration. A major in Biochemistry requires a student to build a strong background in chemistry and biology/molecular biology with upper level courses that emphasize biological applications of chemistry (Biochemistry I and II, Bioanalytical Chemistry, Biophysical Chemistry). The Biochemistry Major is of interdisciplinary nature with flexibility for students to select advanced courses from a variety of departments. All Chemistry and Biochemistry Majors must complete an independent capstone research project and thesis (CHM 281WI Undergraduate Capstone Research and Thesis).

The Department of Chemistry and Biochemistry offers a variety of freshman-level courses that meet the needs of each student with different chemistry background.

Students majoring in chemistry or biochemistry, or minoring in chemistry are encouraged to enroll in CHM 131 (4) General Chemistry, which satisfies the Group IIB requirement including laboratory.

Students with minimal chemistry background may wish to enroll in CHM 120 (4) Survey of Chemistry. This course may satisfy some degree requirements or may also serve as preparation for CHM 131.

Students who have had no previous chemistry background and who desire some experience in chemistry as part of a liberal arts education may wish to enroll in CHM 101 (3) Armchair Chemistry, which satisfies the Group II-B requirement including laboratory. CHM 120 meets the Group II-B requirement but does not include a laboratory. Students taking CHM 120 desiring to satisfy the Group II laboratory requirement may concurrently enroll in CHM 127 (1) Introductory Chemistry Laboratory.

All Chemistry and Biochemistry Majors are required to do an extended independent research project in collaboration with a professor of their choosing as a capstone experience (CHM 491WI Undergraduate Capstone Research and Thesis). The capstone experience includes departmental seminar attendance, research poster presentation, and a written thesis (satisfies Writing Intensive (WI) requirements).

Students planning a major or minor program in chemistry or biochemistry should contact the appropriate departmental advisor by the end of the freshman year. Chemistry courses and their mathematics, physics and biology prerequisites should be scheduled in the proper sequence to avoid later conflict.

All transfer students who wish to complete major or minor programs in chemistry or biochemistry must demonstrate proficiency by completing appropriate course work at Central Michigan University as determined by the departmental major or minor advisor.

A variety of scholarships are available in chemistry for outstanding high school students and current CMU students who plan to major in chemistry or biochemistry.

Courses taken on a Credit/No Credit basis are not allowed on the majors or minors.

### The Faculty

Gabriel Caruntu, Bradley Fahlman, Anton Jensen, Stephen Juris, Dale LeCaptain, Choon Lee, Bingbing Li, Dillip Mohanty, Anja Mueller, Philip Squattrito, Benjamin Swarts, Mary Tecklenburg, Janice Hall Tomasik

## Chemistry Major: General Concentration

B.A.; B.S. degrees

### Chemistry Foundation I (30 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 CHM 211QR - Quantitative Analysis 4(2-6)  
 CHM 331 - Inorganic Chemistry 3(2-4)  
 CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)  
 CHM 353 - Physical Chemistry 5(5-0)  
 CHM 357 - Physical Chemistry Laboratory 2(0-4)

### Chemistry Foundation II (3-6 hours)

Select either CHM 520 or CHM 521/522:  
 CHM 520 - Introductory Biochemistry 3(3-0)  
 CHM 521 - Biochemistry I 3(3-0)  
 CHM 522 - Biochemistry II 3(3-0)

### Chemistry Research (3 hours)

CHM 491WI - Undergraduate Capstone Research and Thesis 1-3(Spec)

### Other Requirements (18 hours)

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY 176 - University Physics Laboratory II 1(0-2)

**Note:** The MTH and PHY courses must be completed prior to enrolling in CHM 353.

### Other Requirements (0 hours)

*Capstone Exit Exam and Survey*

This capstone experience may include taking the Chemistry Diagnostic Undergraduate Chemistry Knowledge (DUCK) exam, the Biochemistry certification exam from the American Society of Biochemistry and Molecular Biology (ASBMB), analyzing and interpreting data, and/or completing an exit survey.

### Elective Advanced Courses (6-7 hours)

Select two of the following:  
 CHM 511 - Advanced Analytical Chemistry 4(1-6)  
 CHM 522 - Biochemistry II 3(3-0)  
 CHM 531 - Advanced Inorganic Chemistry 3(3-0)  
 CHM 555 - Advanced Physical Chemistry 3(3-0)  
 CHM 556 - Applied Quantum Chemistry 3(3-0)

**Note:** You may only count ONE of CHM 555, CHM 556 for this concentration.

### Specialty Elective Courses (4-7 hours)

Select two 500-level CHM electives from the following, or note: only up to 3 credits of CHM 475 can count toward this concentration:

CHM 475 - Internship in Chemistry or Biochemistry 1-6(Spec)  
 CHM 511 - Advanced Analytical Chemistry 4(1-6)  
 CHM 514 - Environmental Chemistry 3(3-0)  
 CHM 515 - Environmental Chemistry of the Great Lakes 2(1-3)  
 CHM 522 - Biochemistry II 3(3-0)  
 CHM 527 - Biochemistry Laboratory 2(1-3)  
 CHM 528 - Bioanalytical Techniques Laboratory 2(1-3)  
 CHM 531 - Advanced Inorganic Chemistry 3(3-0)  
 CHM 541 - Advanced Organic Chemistry: Mechanisms 3(3-0)  
 CHM 542 - Structure Determination Using Spectroscopic and Related Methods 3(3-0)  
 CHM 547 - Advanced Synthesis Laboratory 2(1-3)  
 CHM 551 - Materials Chemistry: Inorganics and Nanomaterials 3(3-0)  
 CHM 555 - Advanced Physical Chemistry 3(3-0)  
 CHM 560 - Biomimetic Nanotechnology 3(3-0)  
 CHM 561 - Polymer Chemistry 3(3-0)  
 CHM 562 - Industrial Chemistry 3(3-0)  
 CHM 566 - Introduction to Biomaterials 3(3-0)  
 CHM 567 - Polymer Science Laboratory 2(1-3)  
 CHM 568 - Pharmaceutical Chemistry 3(3-0)  
 CHM 569 - Materials Characterization 2(1-3)  
 CHM 571 - Topics in Chemistry 1-9(Spec)

CHM 572 - Selected Topics in Chemistry 1-9(Spec)

CHM 583 - Seminar in Chemistry 1-2(Spec)

**Note:** Courses may not double count toward Elective Advanced Courses and Specialty Elective Courses.

**Total: 64-71 semester hours**

## Chemistry Major: Chemical Technology Concentration

B.A.; B.S. degrees

### Chemistry Foundation I (30 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 CHM 211QR - Quantitative Analysis 4(2-6)  
 CHM 331 - Inorganic Chemistry 3(2-4)  
 CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)  
 CHM 353 - Physical Chemistry 5(5-0)  
 CHM 357 - Physical Chemistry Laboratory 2(0-4)

### Chemistry Foundation II (3-6 hours)

Select either CHM 520 or CHM 521/522:  
 CHM 520 - Introductory Biochemistry 3(3-0)  
 CHM 521 - Biochemistry I 3(3-0)  
 CHM 522 - Biochemistry II 3(3-0)

### Chemistry Research (3 hours)

CHM 491WI - Undergraduate Capstone Research and Thesis 1-3(Spec)

### Other Requirements (18 hours)

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY 176 - University Physics Laboratory II 1(0-2)

**Note:** The MTH and PHY courses must be completed prior to enrolling in CHM 353.

### Other Requirements (0 hours)

*Capstone Exit Exam and Survey*

This capstone experience may include taking the Chemistry Diagnostic Undergraduate Chemistry Knowledge (DUCK) exam, the Biochemistry certification exam from the American Society of Biochemistry and Molecular Biology (ASBMB), analyzing and interpreting data, and/or completing an exit survey.

### Required Advanced Courses (4 hours)

CHM 511 - Advanced Analytical Chemistry 4(1-6)

### Specialty Courses (4 hours)

Select two of the following:  
 CHM 475 - Internship in Chemistry or Biochemistry 1-6(Spec)  
 CHM 528 - Bioanalytical Techniques Laboratory 2(1-3)  
 CHM 542 - Structure Determination Using Spectroscopic and Related Methods 3(3-0)  
 CHM 547 - Advanced Synthesis Laboratory 2(1-3)  
 CHM 567 - Polymer Science Laboratory 2(1-3)  
 CHM 569 - Materials Characterization 2(1-3)

### Elective Advanced Courses (3 hours)

Select one of the following:  
 CHM 522 - Biochemistry II 3(3-0)  
 CHM 531 - Advanced Inorganic Chemistry 3(3-0)  
 CHM 555 - Advanced Physical Chemistry 3(3-0)  
 CHM 556 - Applied Quantum Chemistry 3(3-0)  
 CHM 561 - Polymer Chemistry 3(3-0)  
 CHM 562 - Industrial Chemistry 3(3-0)

**Total: 65-68 semester hours**

## Chemistry Major: Environmental Chemistry Concentration

B.A.; B.S. degrees

### Chemistry Foundation I (30 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 CHM 211QR - Quantitative Analysis 4(2-6)  
 CHM 331 - Inorganic Chemistry 3(2-4)  
 CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)  
 CHM 353 - Physical Chemistry 5(5-0)  
 CHM 357 - Physical Chemistry Laboratory 2(0-4)

### Chemistry Foundation II (3-6 hours)

Select either CHM 520 or CHM 521/522:  
 CHM 520 - Introductory Biochemistry 3(3-0)  
 CHM 521 - Biochemistry I 3(3-0)  
 CHM 522 - Biochemistry II 3(3-0)

### Chemistry Research (3 hours)

CHM 491WI - Undergraduate Capstone Research and Thesis 1-3(Spec)

### Other Requirements (18 hours)

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY 176 - University Physics Laboratory II 1(0-2)

**Note:** The MTH and PHY courses must be completed prior to enrolling in CHM 353.

### Other Requirements (0 hours)

*Capstone Exit Exam and Survey*

This capstone experience may include taking the Chemistry Diagnostic Undergraduate Chemistry Knowledge (DUCK) exam, the Biochemistry certification exam from the American Society of Biochemistry and Molecular Biology (ASBMB), analyzing and interpreting data, and/or completing an exit survey.

### Required Advanced Courses (6 hours)

CHM 511 - Advanced Analytical Chemistry 4(1-6)  
 CHM 515 - Environmental Chemistry of the Great Lakes 2(1-3)

### Elective Advanced Courses I (3-4 hours)

Select one of the following options.

**Note:** some of these options have hidden prerequisites. Please check with your advisor.

#### Option 1 (3-4 hours)

Select one of the following:  
 ENS 323 - Biogeochemical Cycling in the Environment 3(2-3)  
 GEL 308 - Hydrologic Processes 3(3-0)

#### Option 2 (3 hours)

Select one of the following:  
 EGR 202 - Environmental Microbiology for Engineers 3(3-0)  
 EGR 305 - Physicochemical Processes in Environmental Engineering 3(3-0)

#### Option 3 (3 hours)

Select one of the following:  
 GEL 502 - Geochemistry of Natural Waters 3(2-3)  
 GEL 512 - Stable Isotope Geochemistry 3(2-3)

#### Option 4 (4 hours)

BIO 213 - Foundations of Ecology 4(3-3)

### Elective Advanced Courses II (3-4 hours)

Select one of the following:  
 BIO 321WI - Introduction to Conservation Biology 3(3-0)  
 BIO 365 - Environmental Contaminants 3(3-0)  
 BIO 366 - Freshwater Biology 3(2-3)  
 BIO 510 - Fisheries Biology and Management 4(3-3)  
 BIO 541 - Wildlife Biology and Management 4(2-4)  
 BIO 561 - Wetland Ecology and Management 3(3-0)  
 BIO 585 - Conservation Medicine 3(3-0)

**Total: 66-71 hours**

## Chemistry Major: Materials Chemistry Concentration

B.A.; B.S. degrees

### Chemistry Foundation I (30 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 CHM 211QR - Quantitative Analysis 4(2-6)  
 CHM 331 - Inorganic Chemistry 3(2-4)  
 CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)  
 CHM 353 - Physical Chemistry 5(5-0)  
 CHM 357 - Physical Chemistry Laboratory 2(0-4)

### Chemistry Foundation II (3-6 hours)

Select either CHM 520 or CHM 521/522:  
 CHM 520 - Introductory Biochemistry 3(3-0)  
 CHM 521 - Biochemistry I 3(3-0)  
 CHM 522 - Biochemistry II 3(3-0)

### Chemistry Research (3 hours)

CHM 491WI - Undergraduate Capstone Research and Thesis 1-3(Spec)

### Other Requirements (18 hours)

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY 176 - University Physics Laboratory II 1(0-2)

**Note:** The MTH and PHY courses must be completed prior to enrolling in CHM 353.

### Other Requirements (0 hours)

*Capstone Exit Exam and Survey*

This capstone experience may include taking the Chemistry Diagnostic Undergraduate Chemistry Knowledge (DUCK) exam, the Biochemistry certification exam from the American Society of Biochemistry and Molecular Biology (ASBMB), analyzing and interpreting data, and/or completing an exit survey.

### Required Specialty Course (2 hours)

CHM 569 - Materials Characterization 2(1-3)

### Elective Advanced Courses (3-4 hours)

Select one of the following:  
 CHM 511 - Advanced Analytical Chemistry 4(1-6)  
 CHM 522 - Biochemistry II 3(3-0)  
 CHM 531 - Advanced Inorganic Chemistry 3(3-0)  
 CHM 555 - Advanced Physical Chemistry 3(3-0)  
 CHM 556 - Applied Quantum Chemistry 3(3-0)

**Note:** You may only count one of CHM 555, CHM 556 for this concentration.

### Elective Specialty Courses I (3 hours)

Select one of the following:  
 CHM 551 - Materials Chemistry: Inorganics and Nanomaterials 3(3-0)  
 CHM 561 - Polymer Chemistry 3(3-0)  
 CHM 566 - Introduction to Biomaterials 3(3-0)

### Elective Specialty Courses II (2-3 hours)

Select one of the following:  
 CHM 475 - Internship in Chemistry or Biochemistry 1-6(Spec)  
 CHM 551 - Materials Chemistry: Inorganics and Nanomaterials 3(3-0)  
 CHM 560 - Biomimetic Nanotechnology 3(3-0)  
 CHM 561 - Polymer Chemistry 3(3-0)  
 CHM 566 - Introduction to Biomaterials 3(3-0)  
 CHM 567 - Polymer Science Laboratory 2(1-3)  
 CHM 568 - Pharmaceutical Chemistry 3(3-0)

### Notes:

Courses may not double count toward Elective Specialty Courses I and Elective Specialty Courses II.

Only up to 3 credits of CHM 475 can count for the Chemistry major - Materials Chemistry Concentration.

**Total: 64-69 hours**

## Biochemistry Major

B.A. and B.S. degree

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

**Note:** A minor in Chemistry is not allowed with a Biochemistry Major.

#### Chemistry Foundation I (29 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 CHM 211QR - Quantitative Analysis 4(2-6)  
 CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)  
 CHM 349 - Organic Chemistry Laboratory 2(0-6)  
 CHM 521 - Biochemistry I 3(3-0)  
 CHM 522 - Biochemistry II 3(3-0)  
 CHM 527 - Biochemistry Laboratory 2(1-3)  
 CHM 528 - Bioanalytical Techniques Laboratory 2(1-3)

#### Chemistry Foundation II (3-5 hours)

Select one of the following:

CHM 353 - Physical Chemistry 5(5-0)  
 CHM 355 - Physical Chemistry: Foundations of Physical and Biophysical Chemistry 3(3-0)

#### Chemistry Research (3 hours)

CHM 491WI - Undergraduate Capstone Research and Thesis 1-3(Spec)

#### Required Courses I (23 hours)

BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 BIO 112 - Foundations of Cell Biology 4(3-3)  
 BIO 211 - Foundations of Genetics 4(3-3)  
 BIO 325 - Biotechnology 3(1-5)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)

#### Required Courses II (10 hours)

Select one of the following options:

##### Option A (10 hours)

PHY 130QR - College Physics I 4(4-0)  
 PHY 131 - College Physics II 4(4-0)  
 PHY 170 - College Physics Laboratory I 1(0-2)  
 PHY 171 - College Physics Laboratory II 1(0-2)

##### Option B (10 hours)

PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY 176 - University Physics Laboratory II 1(0-2)

#### Other Requirements (0 hours)

*Capstone Exit Exam and Survey*

This capstone experience may include taking the Chemistry Diagnostic Undergraduate Chemistry Knowledge (DUCK) exam, the Biochemistry certification exam from the American Society of Biochemistry and Molecular Biology (ASBMB), analyzing and interpreting data, and/or completing an exit survey.

#### Electives (1-4 hours)

Sufficient 300 or greater CHM, BIO, or other courses, selected in consultation with program advisor, to meet the required 71 hours.

Select from the following:

BIO 320 - Biology of Microorganisms 4(3-3)  
 BIO 337 - Comparative Vertebrate Anatomy 4(3-3)  
 BIO 392 - Mammalian Physiology 4(3-3)  
 BIO 397 - Special Topics in Biology 1-6(Spec)  
 BIO 497 - Special Topics in Biology 1-9(Spec)  
 BIO 500 - Biological Statistics 3(2-2)  
 BIO 501 - Evolution 3(3-0)  
 BIO 524 - Molecular Biology 3(3-0)  
 BIO 534 - Endocrinology 3(3-0)  
 BIO 536 - Histology 3(2-3)  
 BIO 537 - Immunology 3(3-0)  
 BIO 539 - Virology 3(3-0)

BIO 544 - Developmental Biology 4(3-3)  
 BIO 545 - Molecular Genetics 3(3-0)  
 BIO 546 - Molecular Genetics Laboratory 1(0-3)  
 BIO 570 - Medical Cell Biology 3-4(Spec)  
 BIO 575 - Applied Bioinformatics 4(3-3)  
 BIO 576WI - Mammalian Cell Culture 3(1-5)  
 BIO 580 - Medical Microbiology 3(1-5)  
 BIO 585 - Conservation Medicine 3(3-0)  
 BIO 590 - Cardiovascular Physiology 3(3-0)  
 BIO 591 - Neurophysiology 3(3-0)  
 BIO 597 - Special Topics in Biology 1-9(Spec)  
 CHM 331 - Inorganic Chemistry 3(2-4)  
 CHM 333 - Bioinorganic Chemistry 3(3-0)  
 CHM 475 - Internship in Chemistry or Biochemistry 1-6(Spec)  
 CHM 511 - Advanced Analytical Chemistry 4(1-6)  
 CHM 514 - Environmental Chemistry 3(3-0)  
 CHM 515 - Environmental Chemistry of the Great Lakes 2(1-3)  
 CHM 531 - Advanced Inorganic Chemistry 3(3-0)  
 CHM 541 - Advanced Organic Chemistry: Mechanisms 3(3-0)  
 CHM 547 - Advanced Synthesis Laboratory 2(1-3)  
 CHM 551 - Materials Chemistry: Inorganics and Nanomaterials 3(3-0)  
 CHM 555 - Advanced Physical Chemistry 3(3-0)  
 CHM 556 - Applied Quantum Chemistry 3(3-0)  
 CHM 560 - Biomimetic Nanotechnology 3(3-0)  
 CHM 561 - Polymer Chemistry 3(3-0)  
 CHM 562 - Industrial Chemistry 3(3-0)  
 CHM 566 - Introduction to Biomaterials 3(3-0)  
 CHM 567 - Polymer Science Laboratory 2(1-3)  
 CHM 568 - Pharmaceutical Chemistry 3(3-0)  
 CHM 569 - Materials Characterization 2(1-3)  
 CHM 571 - Topics in Chemistry 1-9(Spec)  
 CHM 583 - Seminar in Chemistry 1-2(Spec)

**Note:** Only up to 3 credits of BIO 397, BIO 497, BIO 570, BIO 597, CHM 475, CHM 571, or CHM 583 can count for the Biochemistry Major.

Suggestions for electives based on career goals are given below:

- **Pre-Medical, Pre-Veterinarian, and Pre-Dental:** CHM 568, BIO 337, BIO 392, BIO 500, BIO 580, BIO 536, BIO 537, BIO 544.
- **Pre-Pharmacy (Note:** Please check with websites of pharmacy schools you are applying since pre-requisites vary considerably): CHM 568, CHM 337, CHM 500.
- **Pre-Graduate School:** CHM 333, BIO 545, BIO 546, BIO 575, BIO 576WI.
- **Pre-Graduate School:** CHM 333, BIO 545, 546, 575, 576WI.

**Total: 71 semester hours**

## Chemistry Minor

B.A.; B.A.A.; B.S. degrees

#### Chemistry Foundation (18 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 CHM 211QR - Quantitative Analysis 4(2-6)  
 CHM 345 - Organic Chemistry I 3(3-0)  
 CHM 346 - Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)

#### Electives (3 hours)

Select one from the following:

CHM 331 - Inorganic Chemistry 3(2-4)  
 CHM 355 - Physical Chemistry: Foundations of Physical and Biophysical Chemistry 3(3-0)  
 CHM 520 - Introductory Biochemistry 3(3-0)  
 CHM 521 - Biochemistry I 3(3-0)

**Total: 21 semester hours**



## Computer Science

(CPS, ITC)

For information, please contact the chairperson, 989-774-3774, 413 Pearce Hall;  
<https://www.cmich.edu/academics/colleges/college-science-engineering/departments-schools/computer-science>

### Why Study in the Department of Computer Science?

The study of computer science / information technology (IT) / cybersecurity can lead to such careers as a software developer, web developer, database administrator, network administrator, systems analyst, IT architect, cybersecurity analyst, and consultant. All programs serve those students desiring general instruction and those who want to undertake advanced study at the graduate level.

### Computer Science at CMU

The Department of Computer Science offers a major and a minor in Computer Science, a major and minor in Information Technology, a major in Cybersecurity, a minor in Data Engineering, undergraduate certificates in Cloud Computing, Database Development, Mobile Computing, Network Administration, and Web Development, and an M.S. program in Computer Science.

Students desiring a computer science course for general education purposes should consider CPS 180, which fulfills UP Group II-B and is required for the CPS, ITC, and Cybersecurity majors. It is also required on the computer science minor and is an option on the information technology minor.

The Department of Computer Science strongly encourages students interested in computer science programs to meet with a department advisor to enroll in courses that will best meet their needs and interests. Students can contact the department office to be assigned an advisor.

### The Faculty

Jesse Eickholt, Patrick Kinnicutt (Chair), Qi Liao, S.N.J. Murthy, Patrick Seeling, Ahmet Ugur

## Majors

### Computer Science Major

*B.S. degree*

#### Computer Science Student Outcomes

Graduates of the computer science program will have an ability to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

#### Computer Science Program Educational Objectives

Graduates of the computer science program are expected to engage in the following activities within the first five years after graduation:

1. Graduates will contribute to their chosen profession, developing a reputation for solving complex problems.
2. Graduates will engage in lifelong learning activities in computer science or related fields.
3. Graduates will conduct themselves in a professional, responsible and ethical manner in their chosen profession.
4. Graduates will demonstrate a commitment to teamwork, communicating effectively with others from diverse backgrounds.

#### Required Courses I (34 hours)

CPS 180 - Principles of Computer Programming 3(3-0)  
 CPS 181 - Introduction to Data Structures 3(3-0)  
 CPS 210 - Computer Organization and Communications 3(3-0)  
 CPS 240 - Object-Oriented Programming, Analysis and Design 3(3-0)  
 CPS 301 - Social Issues of Computing and Professional Practice 1(1-0)  
 CPS 340 - Advanced Data Structures and Algorithms 3(3-0)  
 CPS 360 - Computer Design and Architecture 3(3-0)  
 CPS 410 - Senior Design I 3(3-0)  
 CPS 450 - Programming Language Concepts 3(3-0)  
 CPS 470 - Introduction to Operating Systems 3(3-0)  
 CPS 498 - Senior Design II 3(2-2)  
 ITC 341 - Introduction to Databases and Applications 3(3-0)

#### Required Courses II - Mathematics Requirements (13 hours)

MTH 132 - Calculus I 4(4-0)  
 MTH 175 - Discrete Mathematics 3(3-0)  
 MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

#### Required Courses III - Mathematics Requirements (3-4 hours)

Select one of the following:

CPS 270 - Computational Analysis and Simulation 3(3-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 321 - Elementary Number Theory 3(3-0)  
 MTH 332 - Introduction to Mathematical Proof 3(3-0)

**Note:** MTH 321 or MTH 332 must be taken after MTH 175.

#### Required Courses IV - Science Requirements (6-10 hours)

Select at least two of the following:

BIO 101 - General Biology 3(2-2)  
 BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)  
 ENS 101QR - Of Earth and Us: Introduction to Environmental Science 3(2-2)  
 GEL 100 - Introduction to Earth Systems 3(2-2)  
 GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)  
 PHY 130QR - College Physics I 4(4-0)  
 PHY 131 - College Physics II 4(4-0)  
 PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 170 - College Physics Laboratory I 1(0-2)  
 PHY 171 - College Physics Laboratory II 1(0-2)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY 176 - University Physics Laboratory II 1(0-2)

#### Notes:

- Only BIO 101 or BIO 111 may count in this requirement, not both.
- Only GEL 100 or GEL 130 may count in this requirement, not both.
- Only PHY 130QR or PHY 145QR may count in this requirement, not both.
- Only PHY 131 or PHY 146 may count in this requirement, not both.
- PHY courses must be taken with the appropriate lab course.

#### Electives (6 hours)

Electives in CPS or ITC numbered at 280 or above

**Total: 62-67 semester hours**

## Cybersecurity Major

*B.S. degree*

The Cybersecurity major will prepare students for a variety of cybersecurity careers, dedicated to securing vulnerable data and information infrastructure and stopping cyberattacks in the digital environment. The major focuses on both rigorous theory and extensive practice of security and privacy in computer systems, networks, software and hardware, database and web applications. The cybersecurity study is based on the solid foundation of computer science and mathematics such as programming languages, data structures, algorithms, operating systems and architectures.

### Required Courses I: Mathematics Courses (13 hours)

MTH 132 - Calculus I 4(4-0)  
MTH 175 - Discrete Mathematics 3(3-0)  
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
MTH 321 - Elementary Number Theory 3(3-0)

### Required Courses II: Computer Science Core Courses (27 hours)

CPS 180 - Principles of Computer Programming 3(3-0)  
CPS 181 - Introduction to Data Structures 3(3-0)  
CPS 210 - Computer Organization and Communications 3(3-0)  
CPS 240 - Object-Oriented Programming, Analysis and Design 3(3-0)  
CPS 280 - Alternative Programming Languages 3(3-0)  
CPS 340 - Advanced Data Structures and Algorithms 3(3-0)  
CPS 360 - Computer Design and Architecture 3(3-0)  
CPS 470 - Introduction to Operating Systems 3(3-0)  
CPS 480 - Introduction to Artificial Intelligence 3(3-0)  
ITC 265 - Basics of Data Communications and Computer Networks 3(3-0)

**Note:** You may only select one of CPS 240 or CPS 280.

### Required Courses III: Cybersecurity Core Courses (18 hours)

CPS 333 - Introduction to Computer Security and Cryptography 3(3-0)  
CPS 373 - Network Security 3(3-0)  
CPS 375 - Social Engineering, Cybersecurity Law, Policy and Ethics 3(3-0)  
CPS 463 - Hardware Security 3(3-0)  
CPS 475 - Software, Database, and Operating System Security 3(3-0)  
CPS 477 - Security Informatics: AI and Visualization 3(3-0)

### Required Courses IV: Cybersecurity Management Courses (6 hours)

Select BIS 512 and one of: BIS 521, BIS 523, or BIS 525:  
BIS 512 - Cybersecurity Analysis 3(3-0)  
BIS 521 - Governance, Risk, and Compliance in Cybersecurity 3(3-0)  
BIS 523 - Cybercrime Forensics 3(3-0)  
BIS 525 - Managing Security and Privacy in the Cloud 3(3-0)

**Total: 64 semester hours**

## Information Technology Major

*B.A.; B.S. degree*

### Required Courses I (34 hours)

CPS 165 - Modern Website Design 3(3-0)  
CPS 180 - Principles of Computer Programming 3(3-0)  
CPS 181 - Introduction to Data Structures 3(3-0)  
CPS 280 - Alternative Programming Languages 3(3-0)  
CPS 282 - Introduction to Multimedia Design 3(3-0)  
CPS 301 - Social Issues of Computing and Professional Practice 1(1-0)  
CPS 395 - Internship in Computer Science 1-9(Spec)  
ITC 190 - Computer Hardware Concepts, Installation, Configuration, and Support 3(3-0)  
ITC 191 - Computer Software Concepts, Installation, Configuration, and Support 3(3-0)  
ITC 265 - Basics of Data Communications and Computer Networks 3(3-0)  
ITC 341 - Introduction to Databases and Applications 3(3-0)  
ITC 392 - Information Technology Administration 3(3-0)

**Note:** 3 hours of internship (CPS 395) is required.

### Required Courses II (3 hours)

An IT project as a capstone experience, preferably in the student's area of concentration. It should involve the design and implementation of a solution to a nontrivial IT problem that has some practical meaning in the real world. Capstone experiences may include a special project conducted on- or off-campus under supervision of a faculty member or an internship or service learning project supervised by an off-campus project director in coordination with the advisor.

Select one of the following:

CPS 497 - Independent Study 1-6(Spec)  
ITC 495 - Senior Internship 1-3(Spec)

### Specialized Tracks (6 hours)

Each student is required to select one track from the following list

#### Data Communication and Networking (6 hours)

ITC 465 - Network Administration and Security 3(3-0)  
ITC 466 - System Administration and Automation 3(3-0)

#### Database (6 hours)

CPS 541 - Databases 3(3-0)  
ITC 441 - Database and Virtual Data Server Administration 3(3-0)

#### Interactive Multimedia Design (6 hours)

CPS 382 - Advanced Multimedia Design 3(3-0)  
ITC 383 - Computer Game Design 3(3-0)

#### Web Application Development (6 hours)

CPS 420 - Web Application Development - Web Services SOA 3(3-0)  
ITC 320 - Web Application Development - Client Side Scripting 3(3-0)

#### Custom Track (6 hours)

A student may choose to develop a customized track by choosing courses from the other IT tracks or courses from another subject area. The courses may be selected from a variety of disciplines at CMU. The objective of this alternative is to allow students to have the opportunity to follow special interests. The student must propose a program of 6 hours that represent a coordinated area of interest, and the proposal must be approved by an IT advisor.

### Other Requirements I (3 hours)

Select one of the following:

STA 282QR - Introduction to Statistics 3(3-0)  
STA 382QR - Elementary Statistical Analysis 3(3-0)

### Other Requirements II (3-4 hours)

Select one of the following:

MTH 132 - Calculus I 4(4-0)  
MTH 175 - Discrete Mathematics 3(3-0)  
MTH 217 - Business Calculus 4(4-0)

### Other Requirements III (3 hours)

Select one of the following:

COM 264 - Communicating in Workplaces 3(3-0)  
COM 361 - Interpersonal Communication 3(3-0)

### Electives (9 hours)

Each student must take 9 additional elective hours, chosen to complement the student's program goals and approved by an IT advisor. In addition to CPS/ITC courses from other IT tracks, or other areas of CPS/ITC, possible electives might include courses such as ART 231, ART 235, ART 335, ART 435, BIS 308, BIS 315, BIS 327, EDU 590, FMD 246, FMD 346, GEO 303, GEO 503, IET 154, IET 226, IET 291, IET 458, IET 502, MGT 335, PAD 585, SOC 210.

**Total: 61-62 semester hours**

## Minors

### Data Engineering Minor

*B.A.; B.A.A.; B.S. degrees*

Data engineering is the field of study that focuses on the collection, transformation and validation of data for subsequent analysis and visualization. This program provides students with skills to design and manage data storage options and to construct data pipelines in the context of data science.

#### Required Core Courses I (18 hours)

CPS 181 - Introduction to Data Structures 3(3-0)  
 CPS 585 - Applied Data Engineering 3(3-0)  
 DAS 150QR - Introduction to Data Science 3(2-2)  
 DAS 251 - Data Visualizations and Programming using Tableau 1(1-1)  
 DAS 252 - Data Visualization and Programming using R/RStudio 1(1-1)  
 DAS 253 - Data Visualization and Programming using SAS 1(1-1)  
 DAS 350 - Exploratory Data Analytics 3(2-2)  
 DAS 450 - Applied Analytics I 3(3-1)

#### Required Courses II (1 hour)

Select one of the following:  
 CPS 301 - Social Issues of Computing and Professional Practice 1(1-0)  
 DAS 260 - Data Integrity and Ethics 1(1-0)

#### Required Courses III (3 hours)

Select one of the following:  
 CPS 240 - Object-Oriented Programming, Analysis and Design 3(3-0)  
 CPS 340 - Advanced Data Structures and Algorithms 3(3-0)

#### Required Courses IV (3 hours)

Select one of the following:  
 CPS 280 - Alternative Programming Languages 3(3-0)  
 CPS 525 - Introduction to Text Mining 3(3-0)  
 ITC 441 - Database and Virtual Data Server Administration 3(3-0)  
 ITC 510 - Software and Data Modeling 3(3-0)

**Note:** The selected course from Required Course IV cannot double count as an elective for the Data Science, Computer Science or Information Technology majors.

**Total: 25 semester hours**

### Information Technology Minor

*B.A.; B.A.A.; B.F.A.; B.S. in B.A.; B.S. degrees*

A minor in Information Technology may not be approved for students with majors in Computer Integrated Manufacturing, or Computer Technology. A minor in Information Technology will be approved for students with a major in Computer Science only if another major or minor outside of the department is also obtained.

#### Required Courses I (9 hours)

Select one of the following options:

##### Option A

CPS 280 - Alternative Programming Languages 3(3-0)

##### Option B

CPS 180 - Principles of Computer Programming 3(3-0)  
 CPS 181 - Introduction to Data Structures 3(3-0)  
 CPS 280 - Alternative Programming Languages 3(3-0)

#### Required Courses II (6 hours)

ITC 190 - Computer Hardware Concepts, Installation, Configuration, and Support 3(3-0)  
 ITC 191 - Computer Software Concepts, Installation, Configuration, and Support 3(3-0)

#### Other Requirements (3 hours)

Select one of the following:  
 STA 282QR - Introduction to Statistics 3(3-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

#### Electives (6 hours)

Select two of the following:

CPS 282 - Introduction to Multimedia Design 3(3-0)  
 CPS 382 - Advanced Multimedia Design 3(3-0)  
 CPS 395 - Internship in Computer Science 1-9(Spec)  
 CPS 420 - Web Application Development - Web Services SOA 3(3-0)  
 ITC 265 - Basics of Data Communications and Computer Networks 3(3-0)  
 ITC 320 - Web Application Development - Client Side Scripting 3(3-0)  
 ITC 341 - Introduction to Databases and Applications 3(3-0)  
 ITC 383 - Computer Game Design 3(3-0)  
 ITC 441 - Database and Virtual Data Server Administration 3(3-0)  
 ITC 465 - Network Administration and Security 3(3-0)  
 ITC 466 - System Administration and Automation 3(3-0)

**Total: 24 semester hours**

### Computer Science Minor

*B.A.; B.A.A.; B.S. degrees*

A minor in Computer Science may be approved for students with a major in Information Technology only if another major or minor outside of the department is also obtained.

#### Required Courses (19 hours)

CPS 180 - Principles of Computer Programming 3(3-0)  
 CPS 181 - Introduction to Data Structures 3(3-0)  
 CPS 210 - Computer Organization and Communications 3(3-0)  
 CPS 240 - Object-Oriented Programming, Analysis and Design 3(3-0)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 175 - Discrete Mathematics 3(3-0)

#### Electives (4-5 hours)

Electives in CPS or ITC numbered 280 or above.

**Total: 23-24 semester hours**

### Multimedia Design Minor

This is an interdisciplinary program. Please see the Index for more information.

## Certificates

### Undergraduate Certificate in Cloud Computing

Cloud computing developers focus on the development of cloud-based solutions, typically by amalgamating computing resources in one or more cloud environments. This certificate is designed for any student who wishes to develop competencies required to create cloud computing solutions.

**Minimum Totals for Graduation: 15 hours**

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This certificate is designed for degree-seeking and non-degree-seeking students, such as life-long learners or professionals seeking to further their career.

We welcome students who have prior learning credits from life, training, or work experiences.

Students must achieve a grade of C (2.0) or better in each certificate course to earn the certificate.

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#### Required Courses I (3 hours)

Select one of the following:

CPS 180 - Principles of Computer Programming 3(3-0)

CPS 190 - Introduction to Programming in Python 3(3-0)

#### Required Courses II (6 hours)

Select one of the following options:

##### Option 1

CPS 181 - Introduction to Data Structures 3(3-0)

ITC 341 - Introduction to Databases and Applications 3(3-0)

##### Option 2

CPS 191 - Python Programming II 3(3-0)

ITC 341 - Introduction to Databases and Applications 3(3-0)

##### Option 3

ITC 191 - Computer Software Concepts, Installation, Configuration, and Support 3(3-0)

ITC 292 - Introduction to System Administration 3(3-0)

#### Required Courses III (6 hours)

ITC 531 - Cloud Application Development 3(3-0)

ITC 532 - Cloud Service Orchestration 3(3-0)

**Total: 15 semester hours**

### Undergraduate Certificate in Database Development

Data backend developers assess, implement, and administer databases and tasks to securely store and retrieve data. This certificate is designed for any student who wishes to develop competencies required to create database solutions.

**Minimum Totals for Graduation: 15 hours**

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This certificate is designed for degree-seeking and non-degree-seeking students, such as life-long learners or professionals seeking to further their career.

We welcome students that have prior learning credits from life, training, or work experiences.

Students must achieve a grade of C (2.0) or better in each certificate course to earn the certificate.

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#### Required Courses I (3 hours)

Select one of the following:

CPS 180 - Principles of Computer Programming 3(3-0)

CPS 190 - Introduction to Programming in Python 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

CPS 181 - Introduction to Data Structures 3(3-0)

CPS 191 - Python Programming II 3(3-0)

#### Required Courses III (9 hours)

CPS 541 - Modern Databases 3(3-0)

ITC 341 - Introduction to Databases and Applications 3(3-0)

ITC 441 - Database and Virtual Data Server Administration 3(3-0)

**Total: 15 semester hours**

### Undergraduate Certificate in Mobile Computing

Mobile computing developers create solutions that amalgamate mobile device-, network-, and cloud-provided resources through amalgamation, for example by combining existing computing sources on-device and in the cloud. This certificate is designed for any student that wishes to develop competencies required to create mobile computing solutions.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This certificate is designed for degree-seeking and non-degree-seeking students, such as life-long learners or professionals seeking to further their career.

We welcome students who have prior learning credits from life, training, or work experiences.

Students must achieve a grade of C (2.0) or better in each certificate course to earn the certificate.

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#### Required Courses I (3 hours)

Select one of the following:

CPS 180 - Principles of Computer Programming 3(3-0)

CPS 190 - Introduction to Programming in Python 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

CPS 181 - Introduction to Data Structures 3(3-0)

CPS 191 - Python Programming II 3(3-0)

#### Required Courses III (6 hours)

CPS 294 - Foundation of Mobile Application Development 3(3-0)

ITC 530 - Mobile Computing 3(3-0)

#### Required Courses IV (3 hours)

Select one of the following:

CPS 497 - Independent Study 1-6(Spec)

ITC 498 - Senior Design I in IT 3(2-2)

**Total: 15 semester hours**



## Undergraduate Certificate in Network Administration

Network administrators create solutions that combine multiple network components such as routers, switches, and servers with network services. This certificate is designed for any student who wishes to develop competencies required to create solutions based on web technologies.

### Minimum Totals for Graduation: 15 hours

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This certificate is designed for degree-seeking and non-degree-seeking students, such as life-long learners or professionals seeking to further their career.

We welcome students who have prior learning credits from life, training, or work experiences.

Students must achieve a grade of C (2.0) or better in each certificate course to earn the certificate.

#### Required Courses I (3 hours)

Select one of the following:

CPS 180 - Principles of Computer Programming 3(3-0)

CPS 190 - Introduction to Programming in Python 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

CPS 181 - Introduction to Data Structures 3(3-0)

CPS 191 - Python Programming II 3(3-0)

ITC 191 - Computer Software Concepts, Installation, Configuration, and Support 3(3-0)

#### Required Courses III (9 hours)

ITC 265 - Basics of Data Communications and Computer Networks 3(3-0)

ITC 465 - Network Administration and Security 3(3-0)

ITC 466 - System Administration and Automation 3(3-0)

**Total: 15 semester hours**

## Undergraduate Certificate in Web Development

Web developers create solutions that tie client-side and server-side components such as data sources and dynamic scripts together, typically to be presented in a browser view. This certificate is designed for any student who wishes to develop competencies required to create solutions based on web technologies.

### Minimum Totals for Graduation: 15 hours

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This certificate is designed for degree-seeking and non-degree-seeking students, such as life-long learners or professionals seeking to further their career.

We welcome students who have prior learning credits from life, training, or work experiences.

Students must achieve a grade of C (2.0) or better in each certificate course to earn the certificate.

#### Required Courses I (3 hours)

Select one of the following:

CPS 180 - Principles of Computer Programming 3(3-0)

CPS 190 - Introduction to Programming in Python 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:

CPS 181 - Introduction to Data Structures 3(3-0)

CPS 191 - Python Programming II 3(3-0)

#### Required Courses III (6 hours)

CPS 420 - Web Application Development - Web Services SOA 3(3-0)

ITC 320 - Web Application Development - Client-Side Scripting 3(3-0)

#### Required Courses IV (3 hours)

Select one of the following:

CPS 497 - Independent Study 1-6(Spec)

ITC 498 - Senior Design I in IT 3(2-2)

**Total: 15 semester hours**

## Earth and Atmospheric Sciences

(ENS, GEL, MET)

For information, please contact the chairperson, 989-774-3179, 314 Brooks Hall;

<https://www.cmich.edu/academics/colleges/college-science-engineering/departments-schools/earth-and-atmospheric-sciences>

### Environmental Science, Geology, and Meteorology

The Earth is a complex system of interacting physical, chemical, and biological processes. Human activity substantially impacts the Earth System. Scientists analyze observations and develop models to understand how components of the Earth System function and interact. The combination of these three majors in a single department allows students the opportunity to broaden their knowledge of the Earth System.

### Why Study Environmental Science?

Environmental scientists use their interdisciplinary knowledge to investigate environmental systems and explore their relationship to our everyday lives. They may clean up polluted areas, advise policy makers, or work with industry to reduce waste. Environmental Science majors go on to work as technicians, consultants, chemists, regulators, and scientific advisors, and may pursue graduate degrees in the environmental and earth sciences, policy, and management. As our environment becomes increasingly stressed, employment opportunities in environmentally related fields are expanding rapidly.

### Environmental Science at CMU

CMU's location in the heart of the Great Lakes provides the perfect setting to study the environment. The Environmental Science major emphasizes skills in critical thinking, technical writing, field and laboratory analyses, and modeling environmental systems. Students in the program work with state-of-the-art software, field instruments, and laboratory equipment used in industry, government, and academic settings. Majors in the program may complete internships and/or independent study projects, with the opportunity to present research results at national conferences. A minor in Environmental Science is also offered.

### Why Study Geology?

Geologists discover, evaluate, and manage energy reserves, mineral deposits, and water supplies needed to sustain human civilization on our planet. They study the movements of continents, formation of mountains, flow of glaciers, and the rise and fall of sea level. Geologists work outdoors, in laboratories, in offices, and in classrooms. Geology graduates often apply their skills to commercial, legal, and governmental enterprises. They also monitor soil and groundwater pollution and evaluate risks from natural hazards such as floods, earthquakes, tsunamis, and volcanos. The Geology major and minor are complementary to many other majors including environmental science, geographic information systems, business, education, and outdoor recreation.

### Geology at CMU

CMU Geology classes emphasize discovery and hands-on learning using an exceptional collection of Earth materials and laboratory facilities. Field trips are an essential part of many geology classes and student participation in field-based research projects is common at CMU. The Geology B.S. degree is designed to impart an understanding of Earth history in the context of deep time while developing strong quantitative, computational, and communication skills. We emphasize relationships among Earth Systems (the Lithosphere, Hydrosphere, Atmosphere, and Biosphere) and three-dimensional thinking that enable students to address geological problems across a large range of physical and temporal scales.

### Why Study Meteorology?

Meteorology is the study of weather and all processes that affect weather. It is a rapidly evolving science with significant relevance to society. From severe storms to long term climate change, meteorologists observe and model atmospheric processes to create forecasts and deepen our understanding of atmospheric processes. Society benefits from more accurate weather information, therefore the ability to communicate complex scientific analysis is of great importance to the meteorologist. Nearly every adult in the United States is a consumer of weather and climate data at some decision-making level. The national benefit of weather information to US households is estimated at \$35 billion per year.

### Meteorology at CMU

Central Michigan University offers a modern, thorough curriculum to prepare students for a career in meteorology. The faculty have terminal degrees in meteorology and teach small classes with laboratory time for practical learning using state-of-the-art weather analysis software. Our program meets the guidelines specified by the American Meteorological Society, as well as the requirements outlined by the National Weather Service. Our program gives students the expertise necessary to attend graduate school, forecast for the National Weather Service, broadcast weather for television and radio, or work in the commercial weather industry.

### The Faculty

Rachael Agardy, John Allen, Martin Baxter, Anthony Chappaz, Laurent Charlet, Maria Mercedes Gonzalez, Zachary Johnson, Jason Keeler, Daria Kluver, Lawrence Lemke, Wendy Robertson, Mona Sirbescu, Natalia Zakharova

## Majors

### Geology Major

*B.S. degree*

Students are encouraged to meet with a departmental advisor once every semester to discuss alignment with their individual goals. Note additional MTH (or STA) and PHY (or CMH) courses strongly recommended for students who plan to go to graduate school. A minor is encouraged but not required.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

- I. In order to declare a Geology major in the Department of Earth and Atmospheric Sciences, a student must meet with a Geology program advisor and successfully complete GEL 100, or GEL 130, or GEL 101 and GEL 102 with a minimum grade of B-.
- II. In order to remain a major in the Geology program, students are required to maintain a minimum average 2.5 GPA in all of the major courses, including required prerequisite courses in Math, Chemistry, Physics, Meteorology, and Geography. Furthermore, students must meet the following competency qualifications:

**A. Written English Competency:** To remain a major or minor in Geology, a student must have scored in at least the 80th percentile group on the university required Written English Competency Examination (CLEP) or earned a minimum grade of B- in English 101. Students not obtaining a minimum grade of B- in English 101 must have earned a minimum grade of B- in English 201. Students should be aware that this is more demanding than the general university competency requirement. Students transferring English competency or English composition course credits from another institution will be expected to meet the same standards required of CMU students.

**B. Oral English Competency:** To remain a major or minor in Geology, a student must have earned a minimum grade of B- in COM 101 or one of its accepted substitutes (TAI 302, COM 267, COM 269, COM 357, TAI 170). Students transferring COM course credits from another institution will be expected to meet the same standard required of CMU students.

**C. Math Competency:** To remain a major in Geology, a student must have successfully satisfied the CMU Mathematics Competency Requirement. Students transferring MTH course credits from another institution will be expected to meet the same standards required of CMU students.

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#### Core Courses I (3-4 hours)

*Introduction to the Geosciences*

Select one of the following options:

##### Option A (3 hours)

GEL 100 - Introduction to Earth Systems 3(2-2)

##### Option B (3 hours)

GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)

##### Option C (4 hours)

GEL 101 - Physical Geology 3(3-0)

GEL 102 - Physical Geology Laboratory 1(0-2)

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#### Core Courses II (25-27 hours)

*Geoscience Fundamentals*

GEL 201 - Earth History 3(2-2)

GEL 270 - Field Methods 2(0-4)

GEL 277 - Research and Communication Skills in Geosciences 1(0-2)

GEL 280 - Geomath 3(2-3)

GEL 310 - Introductory Mineralogy and Petrology 4(2-5)

GEL 340 - Stratigraphy and Sedimentology 4(3-3)

GEL 370 - Structural Geology 3(2-3)

GEL 409/ENS 409 - Professional Development in the Fields of Environmental Science and Geosciences 1(0-2)

GEL 450 - Geology Field Camp 4-6(Spec)

#### Required Courses I (19 hours)

CHM 131 - General Chemistry I 4(3-3)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)

MET 301 - Climatology & Climate Change 3(3-0)

MTH 132 - Calculus I 4(4-0)

PHY 145QR - University Physics I 4(4-0)

PHY 175 - University Physics Laboratory I 1(0-2)

#### Required Courses II (4-5 hours)

Select one of the following options:

##### Option A (4 hours)

CHM 132 - General Chemistry II 4(3-3)

##### Option B (5 hours)

PHY 146 - University Physics II 4(4-0)

PHY 176 - University Physics Laboratory II 1(0-2)

#### Required Courses III (3-4 hours)

Select one of the following courses:

MTH 133 - Calculus II 4(4-0)

STA 382QR - Elementary Statistical Analysis 3(3-0)

**Note:** In addition, students interested in pursuing graduate school are strongly recommended to take both options listed under Required Courses II and Required Courses III.

#### Electives (12 hours)

Select four or more of the following courses for a total of 12 hours.

Six (6) hours of WI courses are recommended:

ENS 389/GEL 389 - Well Construction and Design 1(1-0)

GEL 205/GEO 205 - Oceanography 3(3-0)

GEL 305 - Engineering Geology 3(2-2)

GEL 308 - Hydrologic Processes 3(3-0)

GEL 372 - Introduction to Geophysics 3(2-3)

GEL 375 - Special Problems in Geology 1-6(Spec)

GEL 380WI - Hydrogeology 4(3-3)

GEL 385 - Introductory Petroleum Geology 3(2-2)

GEL 386 - Subsurface Geological Methods 3(2-2)

GEL 397 - Independent Study 1-3(Spec)

GEL 406WI - Senior Thesis 3-6(Spec)

GEL 413 - Geomorphology 3(2-2)

GEL 420 - Applied Geostatistics 3(2-2)

GEL 444 - Preparation for ASBOG Fundamentals of Geology Exam 1(1-1)

GEL 502 - Geochemistry of Natural Waters 3(2-3)

GEL 509 - Applied Hydrologic Modeling 3(2-3)

GEL 512 - Stable Isotope Geochemistry 3(2-3)

GEL 523 - Advanced Petrology 3(2-3)

GEL 550 - Economic Geology 3(2-3)

GEL 575 - Special Topics in Geosciences 1-6(Spec)

GEL 597 - Advanced Independent Study 1-6(Spec)

GEO 303 - Geographic Information Systems 3(2-2)

GEO 308 - Fundamentals of Remote Sensing 3(2-2)

HNS 425 - Hazardous Materials Technology 3(3-0)

#### Notes:

Additional courses that may be offered as Writing Intensive are: GEL 385, 397, and 523. Check Course Search and Registration for WI sections.

Only one of GEO 303 or GEO 308 or HNS 425 may be counted as an elective.

**Total: 66-71 semester hours**

## Meteorology Major

*B.S. degree*

Students are strongly encouraged to meet with college and program academic advisors every semester, and to complete one or more of the following: MET 491 Internship, MET 497 Independent Study, a minor that complements the meteorology major.

### Required Courses (36 hours)

MET 160 - Professional Development in the Atmospheric Sciences 1(1-0)  
 MET 260 - Introduction to Atmospheric Science 3(2-2)  
 MET 270 - Weather Forecasting Practicum 1(1-1)  
 MET 275 - Introduction to Meteorological Data 1(1-1)  
 MET 301 - Climatology & Climate Change 3(3-0)  
 MET 310 - Atmospheric Thermodynamics 3(2-2)  
 MET 312 - Meteorological Instruments and Observations 3(3-0)  
 MET 315 - Meteorological Data Analysis & Visualization 3(2-2)  
 MET 320WI - Physical Meteorology 3(3-0)  
 MET 330 - Dynamic Meteorology I 3(3-0)  
 MET 335 - Dynamic Meteorology II 3(3-0)  
 MET 340 - Synoptic Meteorology I 3(2-2)  
 MET 450 - Mesoscale Meteorology 3(3-0)  
 MET 580WI - Atmospheric Modeling 3(2-2)

### Additional Requirements (31 hours)

CHM 131 - General Chemistry I 4(3-3)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 232 - Linear Algebra and Differential Equations 3(3-0)  
 MTH 233 - Calculus III 4(4-0)  
 PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

### Electives (6 hours)

Select 6 hours from the following:  
 ENS 401WI - Quantitative Environmental Data Analysis 3(2-2)  
 GEL 308 - Hydrologic Processes 3(3-0)  
 MET 305 - Broadcast Meteorology 3(3-0)  
 MET 375 - Special Studies in Meteorology 1-6(Spec)  
 MET 460 - Global Climate Dynamics 3(3-0)  
 MET 470 - Advanced Weather Forecasting 3(2-2)  
 MET 575 - Advanced Special Studies in Meteorology 1-6(Spec)

**Total: 73 semester hours**

## Environmental Science Major

*B.S. degree*

Students pursuing an Environmental Science major are encouraged to meet with an advisor during the first semester of attendance at CMU.

A minor is recommended but not required.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

In order to declare a major in Environmental Science a student must meet the following criteria:

1. An overall GPA of 2.5 or higher
2. A grade of C- or higher in each of the following courses: ENS 101QR, ENS 211, MTH 132, and CHM 131.

Students who reach 56 credit hours without meeting these criteria will need to sign an Intent to Major form. Once the student has met the criteria, the major may be declared.

### Core Courses (15 hours)

ENS 101QR - Of Earth and Us: Introduction to Environmental Science 3(2-2)  
 ENS 211 - Introduction to Professional Development in Environmental Science 1(1-0)  
 ENS 307 - Environmental Field Sampling and Laboratory Analytics 4(2-4)  
 ENS 323 - Biogeochemical Cycling in the Environment 3(2-3)  
 ENS 401WI - Quantitative Environmental Data Analysis 3(2-2)  
 ENS 409/GEL 409 - Professional Development in the Fields of Environmental Science and Geoscience 1(0-2)

### Required Courses I (5-8 hours)

Select one of the following options:

#### Option A (8 hours)

CHM 131 - General Chemistry I 4(3-3)  
 CHM 132 - General Chemistry II 4(3-3)

#### Option B (5 hours)

CHM 141 - General Chemistry for Engineering Students 4(4-0)  
 CHM 142 - Introduction to Chemistry Lab 1(0-3)

### Required Courses II (27 hours)

ENV 101 - Introduction to Environmental Studies 3(3-0)  
 GEL 308 - Hydrologic Processes 3(3-0)  
 GEL 380WI - Hydrogeology 4(3-3)  
 MET 301 - Climatology & Climate Change 3(3-0)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 PHY 145QR - University Physics I 4(4-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

### Required Courses III (3 hours)

Select one of the following:

ECO 301 - Environmental Economics 3(3-0)  
 ENV 300 - Environmental Justice: Race, Gender, Poverty 3(3-0)  
 ENV 310 - Environmental Issues Management 3(3-0)  
 ENV 360 - Water Resources Management 3(3-0)  
 ENV 365 - Energy and the Environment 3(3-0)  
 PSC 516 - Environmental Politics and Policy 3(3-0)

### Required Courses IV (3 hours)

Select one of the following:

BIO 500 - Biological Statistics 3(2-2)  
 ENS 503 - Environmental Modeling 4(2-4)  
 GEL 502 - Geochemistry of Natural Waters 3(2-3)  
 GEL 509 - Applied Hydrologic Modeling 3(2-3)  
 GEO 508 - Applications of Remote Sensing 3(2-2)  
 GEO 528 - Environmental Modeling with GIS 3(2-2)

### Electives I (9-12 hours)

Select from the following:

BIO 111 - Foundations of Evolution and Diversity 4(3-3)  
 BIO 112 - Foundations of Cell Biology 4(3-3)  
 BIO 213 - Foundations of Ecology 4(3-3)

(continued)



CHM 211QR - Quantitative Analysis 4(2-6)  
 CHM 331 - Inorganic Chemistry 3(2-4)  
 CHM 515 - Environmental Chemistry of the Great Lakes 2(1-3)  
 CPS 180 - Principles of Computer Programming 3(3-0)  
 EGR 201 - Introduction to Environmental Engineering 3(3-0)  
 GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)  
 GEL 305 - Engineering Geology 3(2-2)  
 GEL 340 - Stratigraphy and Sedimentology 4(3-3)  
 GEL 372 - Introduction to Geophysics 3(2-3)  
 GEL 385 - Introductory Petroleum Geology 3(2-2)  
 GEL 386 - Subsurface Geological Methods 3(2-2)  
 GEO 203QR - Introduction to Geographic Information Science 3(2-2)  
 GEO 303 - Geographic Information Systems 3(2-2)  
 GEO 308 - Fundamentals of Remote Sensing 3(2-2)  
 MTH 232 - Linear Algebra and Differential Equations 3(3-0)  
 MTH 233 - Calculus III 4(4-0)  
 PHY 146 - University Physics II 4(4-0)

#### Electives II (5-6 hours)

Select from the following:

CPS 106 - Spreadsheet Concepts 1(1-0)  
 ENG 303WI - Technical Writing 3(3-0)  
 ENS 313 - Special Topics in Environmental Science 1-6(Spec)  
 ENS 349 - Phase I Environmental Site Assessment 1(1-0)  
 ENS 353 - Phase II Environmental Site Assessment 1(1-0)  
 ENS 389/GEL 389 - Well Construction and Design 1(1-0)  
 ENS 491 - Internship in Environmental Science 1-3(Spec)  
 ENS 597 - Independent Study in Environmental Science 1-3(Spec)  
 HNS 425 - Hazardous Materials Technology 3(3-0)

**Total: 67-74 semester hours**

## Integrated Science Major

*B.S. in Ed. degree, Standard Secondary Certificate*

This is an interdisciplinary major. Please check the index for the page number.

## Minors

### Geology Minor

*B.A.; B.A.A.; B.S. degrees*

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

- I. In order to declare a Geology minor in the Department of Earth and Atmospheric Sciences, a student must meet with a Geology program advisor and successfully complete GEL 100, or GEL 130, or GEL 101 and GEL 102, with a minimum grade of B-.
- II. In order to remain a minor in the Geology program, students are required to maintain a minimum average 2.5 GPA in all of the minor courses. Furthermore, students must meet the following competency qualifications:

**A. Written English Competency:** To remain a minor in Geology, a student must have scored in at least the 80th percentile group on the university required Written English Competency Examination (CLEP) or earned a minimum grade of B- in English 101. Students not obtaining a minimum grade of B- in English 101 must have earned a minimum grade of B- in English 201. Students should be aware that this is more demanding than the general university competency requirement. Students transferring English competency or English composition course credits from another institution will be expected to meet the same standards required of CMU students.

**B. Oral English Competency:** To remain a minor in Geology, a student must have earned a minimum grade of B- in COM 101 or one of its accepted substitutes (TAI 302, COM 267, COM 269, COM 357, TAI 170). Students transferring COM course credits from another institution will be expected to meet the same standard required of CMU students.

**C. Math Competency:** To remain a minor in Geology, a student must have successfully satisfied the CMU Mathematics Competency Requirement. Students transferring MTH course credits from another institution will be expected to meet the same standards required of CMU students.

#### Required Courses I (3-4 hours)

Students must select one of the following options:

##### Option A (3 hours)

GEL 100 - Introduction to Earth Systems 3(2-2)

##### Option B (3 hours)

GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)

##### Option C (4 hours)

GEL 101 - Physical Geology 3(3-0)

GEL 102 - Physical Geology Laboratory 1(0-2)

#### Required Courses II (6 hours)

GEL 201 - Earth History 3(2-2)

GEL 270 - Field Methods 2(0-4)

GEL 277 - Research and Communication Skills in Geosciences 1(0-2)

#### Required Courses III (3-4 hours)

Select one of the following:

GEL 310 - Introductory Mineralogy and Petrology 4(2-5)

GEL 320 - Earth Materials and Resources 3(2-3)

GEL 340 - Stratigraphy and Sedimentology 4(3-3)

**Note:** GEL 310 and GEL 340 have additional pre/co-requisites.

#### Electives (9 hours)

Select 200-level or higher geology courses.

**Total: 21-23 semester hours**

## Environmental Analytics Minor

*B.S. degree*

Environmental data science is a rapidly growing profession of analysts who harness big data to increase understanding of earth processes, inform environmental policy, and support decision making across the geosciences. While studying Environmental Analytics at CMU, you will learn to interrogate, analyze, and interpret large earth systems data sets to derive solutions to complex environmental problems needed to ensure a sustainable future..

### Required Courses I - Data Science (12 hours)

DAS 150QR - Introduction to Data Science 3(2-2)  
 DAS 251 - Data Visualizations and Programming using Tableau 1(1-1)  
 DAS 252 - Data Visualization and Programming using R/RStudio 1(1-1)  
 DAS 260 - Data Integrity and Ethics 1(1-0)  
 DAS 350 - Exploratory Data Analytics 3(2-2)  
 DAS 450 - Applied Analytics I 3(3-1)

### Required Courses II - Environmental Analytics (3 hours)

Select one of the following:

ENS 101QR - Of Earth and Us: Introduction to Environmental Science 3(2-2)  
 GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)  
 MET 260 - Introduction to Atmospheric Science 3(2-2)

**Note:** Selecting GEL130QR will require additional prerequisites for subsequent courses in the minor.

### Required Courses III - Environmental Analytics (6 hours)

GEL 308 - Hydrologic Processes 3(3-0)  
 MET 301 - Climatology & Climate Change 3(3-0)

### Electives (3 hours)

Select one of the following:

ENS 401WI - Quantitative Environmental Data Analysis 3(2-2)  
 GEL 420 - Applied Geostatistics 3(2-2)  
 MET 315 - Meteorological Data Analysis & Visualization 3(2-2)

**Total: 24 semester hours**

## Environmental Science Minor

*B.A., B.A.A., B.S. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

In order to sign an Environmental Science minor, students must hold a 2.5 or greater overall GPA. Students pursuing an Environmental Science minor are encouraged to meet with Departmental as well as College academic advisors.

### Required Courses I (12 hours)

ENS 101QR - Of Earth and Us: Introduction to Environmental Science 3(2-2)  
 ENS 323 - Biogeochemical Cycling in the Environment 3(2-3)  
 GEL 308 - Hydrologic Processes 3(3-0)  
 MET 301 - Climatology & Climate Change 3(3-0)

### Required Courses II (4 hours)

Select one of the following:

CHM 131 - General Chemistry I 4(3-3)  
 CHM 141 - General Chemistry for Engineering Students 4(4-0)

### Electives (6-8 hours)

Select two of the following:

BIO 213 - Foundations of Ecology 4(3-3)  
 BIO 240 - Conservation of Natural Resources 3(3-0)  
 BIO 334/GEO 334 - Soil Science 3(2-2)  
 BLR 521 - Environmental Law and Policy 3(3-0)  
 CHM 211QR - Quantitative Analysis 4(2-6)  
 CHM 350/ANT 350/BIO 350WI - Water as Life, Death, and Power 3(3-0)  
 ECO 301 - Environmental Economics 3(3-0)  
 EGR 202 - Environmental Microbiology for Engineers 3(3-0)  
 GEL 130 - Sustainable Earth: Geology for the 21st Century 3(2-2)  
 GEL 380WI - Hydrogeology 4(3-3)  
 GEL 386 - Subsurface Geological Methods 3(2-2)  
 GEL 502 - Geochemistry of Natural Waters 3(2-3)  
 GEO 203QR - Introduction to Geographic Information Science 3(2-2)  
 GEO 308 - Fundamentals of Remote Sensing 3(2-2)  
 HSC 352 - Environmental Health 3(3-0)  
 HST 302 - Comparative Environmental History 3(3-0)  
 MET 460 - Global Climate Dynamics 3(3-0)  
 PSC 516 - Environmental Politics and Policy 3(3-0)

**Total: 22-24 semester hours**

## Earth Science Minor

*B.S. in Ed. degree, Standard Secondary Certificate*

This is an interdisciplinary minor. Please check the index for the page number.

## Engineering and Technology

(EGR, IET)

For information, please contact the school director, 989-774-3033, 100 Engineering & Technology Building;  
<https://www.cmich.edu/academics/colleges/college-science-engineering/departments-schools/school-of-engineering-and-technology>

### Why Study Engineering?

Students enter the fields of engineering to intensify and broaden their knowledge within engineering and engineering technology. They will gain preparation for industrial careers in a variety of engineering, technical, supervisory, or managerial capacities. Courses in these fields contribute to their technical and professional growth.

### Engineering and Engineering Technology at CMU

The School of Engineering and Technology offers a variety of choices to students interested in careers in engineering and engineering technology. Majors and minors within the School reflect the diversity of our programs. As you select from our majors and minor, remember that you are pursuing a degree, and must meet all the degree requirements as well as the major and minor requirements listed.

**Graduate Study:** The Master of Science in Engineering is available. Refer to the *Graduate Studies Bulletin* or an advisor for additional information.

### The Faculty

Ahmed Abdelgawad, Daniel Chen, Frank Cheng, Qingsong Cui, Brian DeJong, Goksel Demirer, Waseem Haider, Chaneok Jeong, Ernur Karadogan, David Kelley, Joseph Langenderfer, Samson Lee, Terry Lerch, Walter Malec, L. Itzel Marquez-Hernandez, Adam Mock, Jim Morrison, Molu Olumolade, Benjamin Ritter, Ishraq Shabib, Donghyun Shin, Maggie Williams, Dru Wilson

## Engineering Majors

The engineering majors prepare students to help solve many exciting and demanding problems including important global issues related to energy and the environment, as well as the development of new devices, products and materials. Students work with advanced computer simulations and modern, well-equipped laboratories that provide exciting and valuable hands-on experience.

### Mission Statement

The mission of the engineering programs at Central Michigan University is to

- Provide an environment that encourages intense interaction between and among faculty and students.
- Provide instruction that enables students to move from theoretical concepts into practical applications.
- Create graduates who are capable of succeeding in the job market or advanced studies.

### Admission Policy

Any student in good academic standing at CMU may declare a major in any of the engineering or engineering technology majors. However, students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and engineering technology (IET) courses. Students wishing to substitute EGR or IET courses at 300 level or above must obtain pre-approval from the School Director unless those courses appear on CMU's What Will Transfer website: <https://netconnect.cmich.edu/whatwilltransfer>.

## Computer Engineering Major

*B.S.Cmp.E. degree*

Requirements for the Bachelor of Science in Computer Engineering are listed in the degree section of this bulletin (see index for page number). The degree, including the major, requires a minimum of 130-136 hours.

### Program Educational Objectives for Computer Engineering

Graduates of the computer engineering program shall exhibit excellence in their profession in a diverse range of industries, government agencies, and academic institutions as evidenced by:

- career satisfaction;
- ability to function independently and as members of cross-functioning teams;
- gaining sequential promotions to leadership positions;
- professional visibility (e.g., patents, awards, invention disclosures, publications, presentations);
- engagement in entrepreneurial activities;
- matriculation in, and graduation from, high-quality graduate programs at the masters or doctoral level;
- exhibiting the highest levels of professional ethics.

### Computer Engineering Student Outcomes

Upon graduation, B.S.Cmp.E. students are expected to have an ability to:

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Communicate effectively with a range of audiences.
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students pursuing one of our majors or minors are required to meet with an E&T advisor during the first semester of attendance at CMU. Engineering majors are required to meet with their engineering advisor each semester to ensure students select appropriate courses to facilitate their progress through the program. Registration in upper level engineering classes is not allowed until after this meeting. Prerequisites are strictly enforced for all engineering classes.

#### Admission Requirements

Any student in good academic standing at CMU may declare a major in any of the engineering or engineering technology majors. However, students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and engineering technology (IET) courses. Students wishing to substitute EGR or IET courses at 300 level or above must obtain pre-approval from the School Director unless those courses appear on CMU's What Will Transfer website: <https://netconnect.cmich.edu/whatwilltransfer>.

#### Retention & Termination Standards

In order to remain a major (BSCmpE) in computer engineering, a student must meet the following criteria:

- Students must select courses in consultation with an engineering advisor.
- Students may not take courses required for this major Credit/No Credit.
- Students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) courses.
- At least 30 credits of EGR courses must be taken at CMU to graduate with this major.
- If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

The engineering and technology degree programs consist of extensive laboratory work that involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practice. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signs.

#### Required Courses (63 hours)

CPS 181 - Introduction to Data Structures 3(3-0)  
 CPS 340 - Advanced Data Structures and Algorithms 3(3-0)  
 EGR 120 - Introduction to Engineering 3(2-2)  
 EGR 190QR - Digital Circuits 3(3-0)  
 EGR 290 - Circuit Analysis I 3(3-0)  
 EGR 292 - Circuit Analysis II 3(3-0)  
 EGR 298 - Microelectronic Circuits I 3(3-0)  
 EGR 390 - Computer System Design using HDL 3(3-0)  
 EGR 391 - Signal and System Theory 3(3-0)  
 EGR 392 - Microelectronic Circuits II 3(3-0)  
 EGR 393 - Circuit Lab 3(2-2)  
 EGR 394 - Computer Circuit Simulation 3(2-2)  
 EGR 396 - Microprocessor Fundamentals 3(3-0)  
 EGR 398 - Microelectronics and Computer Lab 3(2-2)  
 EGR 480 - Digital Integrated Circuit Design with FPGAs 3(3-0)  
 EGR 481 - Embedded System Design 3(3-0)

EGR 482 - Design and Organization of Computer Hardware Systems 3(3-0)  
 EGR 484 - Digital Signal Processing 3(3-0)  
 EGR 487 - Introduction to VLSI Systems 3(3-0)  
 EGR 489WI - Senior Design I 3(2-2)  
 EGR 499WI - Senior Design II 3(1-4)

#### Electives (3 hours)

Select at least 3 hours from the following engineering courses:

EGR 251 - Engineering Statics 3(3-0)  
 EGR 371 - Robotics and Automation 3(2-2)  
 EGR 375 - Mechatronics 3(3-0)  
 EGR 388 - Introduction to Electromagnetics 3(3-0)  
 EGR 397 - Special Topics in Engineering 1-6(Spec)  
 EGR 492 - Automatic Control Systems 3(3-0)  
 EGR 496 - Communication Systems 3(3-0)  
 EGR 497 - Special Topics in Engineering 1-6(Spec)  
 EGR 580 - Fundamentals of Internet of Things 3(3-0)  
 EGR 585 - Wireless Sensor Networks 3(3-0)  
 EGR 591 - CMOS Circuit Design 3(2-2)  
 EGR 597 - Special Topics in Engineering 1-6(Spec)

**Total: 66 semester hours**

## Electrical Engineering Major

*B.S.E.E. degree*

All requirements for the Bachelor of Science in Electrical Engineering are listed in the degree section of this bulletin (see index for page number). The degree, including the major, requires a minimum of 130-134 hours.

The BSEE degree is accredited by ABET.

#### Program Educational Objectives for Electrical Engineering

The engineering programs have established the following expectations for the accomplishments of our graduates in the first several years following graduation:

- Our graduates will apply their engineering knowledge and problem solving skills in related professional fields.
- Our graduates will function as team members who think critically, communicate effectively, and demonstrate initiative and self-motivation.
- Our graduates will be actively involved in their profession and engaged in lifelong learning activities in electrical engineering or related fields.
- Our graduates will exhibit high levels of professionalism and professional ethics.

#### Electrical Engineering Student Outcomes

Upon graduation, B.S.E.E. students are expected to have an ability to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.

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**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Students pursuing one of our majors or minors are required to meet with an E&T advisor during the first semester of attendance at CMU.

Engineering majors are required to meet with their engineering advisor each semester to ensure that each student selects appropriate courses to facilitate their progress through the program. Registration in upper level engineering classes is not allowed until after this meeting. Prerequisites are strictly enforced for all engineering classes.

**Admission Requirements**

Any student in good academic standing at CMU may declare a major in any of the engineering or engineering technology majors. However, students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and engineering technology (IET) courses. Students wishing to substitute EGR or IET courses at 300 level or above must obtain pre-approval from the School Director unless those courses appear on CMU's What Will Transfer website: <https://netconnect.cmich.edu/whatwilltransfer>.

**Retention & Termination Standards**

In order to remain a major (BSEE) in electrical engineering, a student must meet the following criteria:

1. Students must select courses in consultation with an engineering advisor.
2. Students may not take courses required for this major Credit/No Credit.
3. Students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) courses.
4. At least 30 credits of EGR courses must be taken at CMU to graduate with this major.
5. If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

The engineering and technology degree programs consist of extensive laboratory work that involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

**Required Courses I (54 hours)**

EGR 120 - Introduction to Engineering 3(2-2)  
 EGR 190QR - Digital Circuits 3(3-0)  
 EGR 290 - Circuit Analysis I 3(3-0)  
 EGR 292 - Circuit Analysis II 3(3-0)  
 EGR 298 - Microelectronic Circuits I 3(3-0)  
 EGR 300 - Engineering Economic Analysis 3(3-0)  
 EGR 388 - Introduction to Electromagnetics 3(3-0)  
 EGR 390 - Computer System Design using HDL 3(3-0)  
 EGR 391 - Signal and System Theory 3(3-0)  
 EGR 392 - Microelectronic Circuits II 3(3-0)  
 EGR 393 - Circuit Lab 3(2-2)  
 EGR 394 - Computer Circuit Simulation 3(2-2)  
 EGR 396 - Microprocessor Fundamentals 3(3-0)  
 EGR 398 - Microelectronics and Computer Lab 3(2-2)  
 EGR 489WI - Senior Design I 3(Spec)  
 EGR 492 - Automatic Control Systems 3(3-0)  
 EGR 496 - Communication Systems 3(3-0)  
 EGR 499WI - Senior Design II 3(Spec)

**Required Courses II (3 hours)**

Select one of the following:

CPS 180 - Principles of Computer Programming 3(3-0)  
 EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)

**Electives (12 hours)**

Select at least 12 hours from the following engineering courses:

EGR 201 - Introduction to Environmental Engineering 3(3-0)  
 EGR 251 - Engineering Statics 3(3-0)

EGR 253 - Engineering Dynamics 3(3-0)  
 EGR 255 - Strength of Materials 3(3-0)  
 EGR 355 - Engineering Materials 3(3-0)  
 EGR 356 - Thermodynamics I 3(3-0)  
 EGR 358 - Fluid Mechanics 3(3-0)  
 EGR 371 - Robotics and Automation 3(2-2)  
 EGR 375 - Mechatronics 3(3-0)  
 EGR 377 - Engineering Prototypes 3(2-2)  
 EGR 397 - Special Topics in Engineering 1-6(Spec)  
 EGR 410 - Sustainable Engineering 3(3-0)  
 EGR 437 - Directed Research in Engineering 1-3(Spec)  
 EGR 480 - Digital Integrated Circuit Design with FPGAs 3(3-0)  
 EGR 481 - Embedded System Design 3(3-0)  
 EGR 482 - Design and Organization of Computer Hardware Systems 3(3-0)  
 EGR 484 - Digital Signal Processing 3(3-0)  
 EGR 487 - Introduction to VLSI Systems 3(3-0)  
 EGR 490 - Computer Data Acquisition and Instrumentation 3(3-0)  
 EGR 497 - Special Topics in Engineering 1-6(Spec)  
 EGR 580 - Fundamentals of Internet of Things 3(3-0)  
 EGR 585 - Wireless Sensor Networks 3(3-0)  
 EGR 588 - Photonics 3(3-0)  
 EGR 591 - CMOS Circuit Design 3(2-2)  
 EGR 594 - Power Electronics 3(3-0)  
 EGR 597 - Special Topics in Engineering 1-6(Spec)

**Notes:**

Not more than three credits of EGR 437 will count.

Students may only count TWO of EGR 480 OR EGR 481 OR EGR 482 OR EGR 484.

**Total: 69 semester hours**

**Environmental Engineering Major**

All requirements for the Bachelor of Science in Environmental Engineering are listed in the degree section of this bulletin (see index for page number). The degree, including the major, requires a minimum of 131 hours.

**Program Educational Objectives for Environmental Engineering**

The engineering programs have established the following expectations for the accomplishments of our graduates in the first several years following graduation:

1. Our graduates will apply their engineering knowledge and problem solving skills in related professional fields.
2. Our graduates will function as team members who think critically, communicate effectively, and demonstrate initiative and self-motivation.
3. Our graduates will be actively involved in their profession and engaged in lifelong learning activities in environmental engineering or related fields.
4. Our graduates will exhibit high levels of professionalism and professional ethics.

**Environmental Engineering Student Outcomes**

Upon graduation, B.S.Env.E. students are expected to have an ability to:

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Communicate effectively with a range of audiences.
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students pursuing one of our majors or minors are required to meet with an E&T advisor during the first semester of attendance at CMU.

Engineering majors are required to meet with their engineering advisor each semester to ensure that each student selects appropriate courses to facilitate their progress through the program. Registration in upper level engineering classes is not allowed until after this meeting. Prerequisites are strictly enforced for all engineering classes.

#### Admission Requirements

Any student in good academic standing at CMU may declare a major in any of the engineering or engineering technology majors. However, students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and engineering technology (IET) courses. Students wishing to substitute EGR or IET courses at 300 level or above must obtain pre-approval from the School Director unless those courses appear on CMU's What Will Transfer website: <https://netconnect.cmich.edu/whatwilltransfer>.

EGR 358 requires a signed Engineering Major to enroll in the course.

EGR 358 is a required course for this major. The University requires that students have a signed major at 56 credit hours.

#### Retention & Termination Standards

In order to remain a major (BSEnVE) in environmental engineering, a student must meet the following criteria:

- Students must select courses in consultation with an engineering advisor.
- Students may not take courses required for this major Credit/No Credit.
- Students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) courses.
- At least 36 credits of EGR/CHM or BIO courses must be taken at CMU to graduate with this major.
- If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

The engineering and technology degree programs consist of extensive laboratory work that involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

#### Required Courses (54 hours)

EGR 120 - Introduction to Engineering 3(2-2)  
 EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)  
 EGR 202 - Environmental Microbiology for Engineers 3(3-0)  
 EGR 203 - Water Chemistry 3(3-0)  
 EGR 251 - Engineering Statics 3(3-0)  
 EGR 253 - Engineering Dynamics 3(3-0)  
 EGR 300 - Engineering Economic Analysis 3(3-0)  
 EGR 304 - Biological Processes in Environmental Engineering 3(3-0)  
 EGR 305 - Physicochemical Processes in Environmental Engineering 3(3-0)  
 EGR 306 - Environmental Engineering Laboratory 3(1-4)  
 EGR 356 - Thermodynamics I 3(3-0)  
 EGR 358 - Fluid Mechanics 3(3-0)  
 EGR 407 - Water and Wastewater Engineering 3(3-0)  
 EGR 408 - Water Resources Engineering 3(3-0)  
 EGR 409 - Solid and Hazardous Waste Engineering 3(3-0)  
 EGR 410 - Sustainable Engineering 3(3-0)  
 EGR 489WI - Senior Design I 3(Spec)  
 EGR 499WI - Senior Design II 3(Spec)

#### Electives (9 hours)

Select at least 9 hours from the following:

ANT 350/BIO 350/CHM 350WI - Water as Life, Death, and Power 3(3-0)  
 BIO 240 - Conservation of Natural Resources 3(3-0)  
 ECO 301 - Environmental Economics 3(3-0)  
 EGR 511 - Water Quality Management 3(3-0)  
 EGR 512 - Air Pollution Engineering 3(3-0)  
 ENS 307 - Environmental Field Sampling and Laboratory Analytics 4(2-4)  
 ENS 323 - Biogeochemical Cycling in the Environment 3(2-3)  
 ENS 401WI - Quantitative Environmental Data Analysis 3(2-2)  
 ENS 503 - Environmental Modeling 3(2-3)  
 ENV 300 - Environmental Justice: Race, Gender, Poverty 3(3-0)  
 GEL 380WI - Hydrogeology 4(3-3)  
 GEL 502 - Geochemistry of Natural Waters 3(2-3)  
 HSC 352 - Environmental Health 3(3-0)  
 HST 302 - Comparative Environmental History 3(3-0)  
 SOC 370/ANT 370 - Global Environmental Issues 3(3-0)

**Total: 63 semester hours**

## Mechanical Engineering Major

*B.S.M.E. degree*

All requirements for the Bachelor of Science in Mechanical Engineering are listed in the degree section of this bulletin (see index for page number). The degree, including the major, requires a minimum of 130-134 hours.

The BSME degree is accredited by ABET.

#### Program Educational Objectives for Mechanical Engineering

The engineering programs have established the following expectations for the accomplishments of our graduates in the first several years following graduation:

- Our graduates will apply their engineering knowledge and problem solving skills in related professional fields.
- Our graduates will function as team members who think critically, communicate effectively, and demonstrate initiative and self-motivation.
- Our graduates will be actively involved in their profession and engaged in lifelong learning activities in mechanical engineering or related fields.
- Our graduates will exhibit high levels of professionalism and professional ethics.

#### Mechanical Engineering Student Outcomes

Upon graduation, B.S.M.E. students are expected to have an ability to:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- Communicate effectively with a range of audiences.
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.

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**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Students pursuing one of our majors or minors are required to meet with an E&T advisor during the first semester of attendance at CMU.

Engineering majors are required to meet with their engineering advisor each semester to ensure that each student selects appropriate courses to facilitate their progress through the program. Registration in upper level engineering classes is not allowed until after this meeting. Prerequisites are strictly enforced for all engineering classes.

**Admission Requirements**

Any student in good academic standing at CMU may declare a major in any of the engineering or engineering technology majors. However, students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and engineering technology (IET) courses. Students wishing to substitute EGR or IET courses at 300 level or above must obtain pre-approval from the School Director unless those courses appear on CMU's What Will Transfer website: <https://netconnect.cmich.edu/whatwilltransfer>.

**Retention & Termination Standards**

In order to remain a major (BSME) in mechanical engineering, a student must meet the following criteria:

1. Students must select courses in consultation with an engineering advisor.
2. Students may not take courses required for this major Credit/No Credit.
3. Students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) courses.
4. Students wishing to substitute EGR or IET courses at 300 level or above must obtain preapproval from the School Director unless those courses appear on CMU's What Will Transfer website: <https://netconnect.cmich.edu/whatwilltransfer>.
5. At least 30 credits of EGR courses must be taken at CMU to graduate with this major.
6. If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

The engineering and technology degree programs consist of extensive laboratory work that involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

**Required Courses (66 hours)**

EGR 120 - Introduction to Engineering 3(2-2)  
 EGR 190QR - Digital Circuits 3(3-0)  
 EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)  
 EGR 251 - Engineering Statics 3(3-0)  
 EGR 253 - Engineering Dynamics 3(3-0)  
 EGR 255 - Strength of Materials 3(3-0)  
 EGR 300 - Engineering Economic Analysis 3(3-0)  
 EGR 355 - Engineering Materials 3(3-0)  
 EGR 356 - Thermodynamics I 3(3-0)  
 EGR 358 - Fluid Mechanics 3(3-0)  
 EGR 359 - Machine Design I 3(3-0)  
 EGR 360 - Solid Mechanics Laboratory 3(1-4)  
 EGR 375 - Mechatronics 3(3-0)  
 EGR 377 - Engineering Prototypes 3(2-2)  
 EGR 456 - Thermodynamics II and Heat Transfer 3(3-0)  
 EGR 458 - Measurement and Instrumentation Laboratory 3(1-4)  
 EGR 459 - Machine Design II 3(3-0)  
 EGR 460 - Thermal Fluids Laboratory 3(1-4)  
 EGR 489WI - Senior Design I 3(Spec)  
 EGR 499WI - Senior Design II 3(Spec)  
 EGR 553 - Mechanical Vibrations 3(3-0)  
 IET 154 - Engineering Design Graphics 3(2-2)

**Electives (6 hours)**

Select 6 hours from the following courses:  
 EGR 201 - Introduction to Environmental Engineering 3(3-0)  
 EGR 290 - Circuit Analysis I 3(3-0)  
 EGR 371 - Robotics and Automation 3(2-2)  
 EGR 397 - Special Topics in Engineering 1-6(Spec)  
 EGR 437 - Directed Research in Engineering 1-3(Spec)  
 EGR 477 - Finite Element Analysis 3(3-0)  
 EGR 479 - Fracture and Fatigue Analysis 3(3-0)  
 EGR 497 - Special Topics in Engineering 1-6(Spec)  
 EGR 554 - Mechanical Controls 3(3-0)  
 EGR 555 - Engineering Acoustics 3(3-0)  
 EGR 576 - Mechanics of Composite Materials 3(3-0)  
 EGR 578 - Advanced Mechanics of Materials 3(3-0)  
 EGR 597 - Special Topics in Engineering 1-6(Spec)

**Note:** Not more than 3 credits of EGR 437 will count.

**Total: 72 semester hours**

**Engineering Technology Majors****Engineering Technology Student Outcomes**

All Engineering Technology programs share the following Student Outcomes:

By the time of graduation from any of the Engineering Technology programs, students are expected to have:

1. An ability to apply knowledge, techniques, skills, and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline
2. An ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline
3. An ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature
4. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes
5. An ability to function effectively as a member as well as a leader on technical teams.

**Industrial Engineering Technology Major**

*B.S.E.T. degree*

The Industrial Engineering Technology major will prepare graduates with the technical and managerial skills necessary to develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy. Graduates will be prepared for careers in system design, integration, manufacturing, and management.

All Industrial Engineering Technology students are required to complete the following required courses. Students must complete the coursework in major requirements and electives.

**IET Mission Statement**

The mission of the Industrial Engineering Technology program in the BS in Engineering Technology degree is to prepare students to be competent in the area of applied industrial engineering with the potential for growth in management and leadership.

**Program Educational Objectives (PEO) for Industrial Engineering Technology**

The Program Educational Objectives (PEOs) of BSET-Industrial Engineering Technology (IET) program at CMU describe the expected accomplishments of the BSET-IET graduates during their first few years after graduation.



The main goal of the BSET-Industrial Engineering Technology program at CMU is to provide a competitive curriculum and learning environment that prepares graduates who will be able to:

1. Attain employment and practice successfully in an industrial engineering technology related profession;
2. Work in multi-disciplinary teams providing technical knowledge and effective communication as engineering technologists;
3. Remain technically current through continuous learning and self-improvement;
4. Understand and exhibit professional, ethical and social responsibility as they pursue their careers.

#### Industrial Engineering Technology Program Criteria

In addition to the Engineering Technology Student Outcomes, graduates of the Industrial Engineering Technology program will demonstrate the ability to:

1. accomplish the integration of systems using appropriate analytical, computational, and application practices and procedures;
2. apply knowledge of probability, statistics, engineering economic analysis and cost control, and other technical sciences and specialties necessary in the field of industrial engineering technology.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

The engineering and technology degree programs consist of extensive laboratory work that involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

Students must meet with an E&T advisor at least once a semester to discuss their progress in meeting the degree requirements. Prerequisites will be strictly enforced for all engineering technology coursework.

A maximum of 6 semester hours of Credit/No Credit may be used on departmental majors (excluding computer, electrical and mechanical engineering) or minors. Credit/No Credit courses are identified in the Course Search & Registration.

#### Admission Requirements

Any student in good academic standing at CMU may declare a major in any of the engineering or engineering technology majors. However, students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and engineering technology (IET) courses. Students wishing to substitute EGR or IET courses at 300 level or above must obtain pre-approval from the School Director unless those courses appear on CMU's What Will Transfer website: <https://netconnect.cmich.edu/whatwilltransfer>.

#### Retention & Termination Standards

In order to remain a major in Industrial Engineering Technology, a student must meet the following criteria:

1. Students must select courses in consultation with an engineering technology advisor.
2. Students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and engineering technology (IET) courses.
3. At least 30 credits of IET courses must be taken at CMU to graduate with this major.
4. If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

#### Required Courses (63 hours)

EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)  
 EGR 300 - Engineering Economic Analysis 3(3-0)  
 EGR 489WI - Senior Design I 3(Spec)  
 EGR 499WI - Senior Design II 3(Spec)  
 IET 130 - Industrial Materials and Testing 3(2-2)  
 IET 154 - Engineering Design Graphics 3(2-2)

IET 170 - Manufacturing Processes I 3(1-4)  
 IET 181QR - Alternative Energy Analysis 3(2-2)  
 IET 226 - Parametric Design and Modeling 3(2-2)  
 IET 279 - Applied Statics 3(3-0)  
 IET 291 - Applied Circuits 3(2-2)  
 IET 326 - Manufacturing Methods Analysis 3(3-0)  
 IET 327 - Industrial Safety 3(3-0)  
 IET 365 - Manufacturing Processes II 3(2-2)  
 IET 375 - Robotics 3(2-2)  
 IET 377 - Computer Numerical Control Programming 3(2-2)  
 IET 426 - Plant Layout and Materials Handling 3(3-0)  
 IET 428 - Manufacturing Quality 3(3-0)  
 IET 500 - Production Concepts 3(3-0)  
 IET 501 - Application of Industrial Management Principles 3(3-0)  
 STA 282QR - Introduction to Statistics 3(3-0)

#### Technical Electives (6 hours)

Select 6 semester hours of coursework from the following:

EGR 120 - Introduction to Engineering 3(2-2)  
 EGR 190QR - Digital Circuits 3(3-0)  
 EGR 290 - Circuit Analysis I 3(3-0)  
 ENG 303WI - Technical Writing 3(3-0)  
 IET 223QR - Lean Six Sigma for Process Improvement 3(3-0)  
 IET 284 - Fluid Power Technology 3(2-2)  
 IET 324WI - Product Design and Development 3(2-2)  
 IET 350 - Mechanism Design 3(3-0)  
 IET 379 - Mechanics of Materials 3(3-0)  
 IET 450 - Mechanical Computer-Aided Engineering 3(2-2)  
 IET 451 - Geometric Dimensioning and Tolerancing 3(2-2)  
 MTH 133 - Calculus II 4(4-0)

**Total: 69 semester hours**

## Mechanical Engineering Technology Major

*B.S.E.T. degree*

The Mechanical Engineering Technology major is designed to prepare students with knowledge, problem solving ability, and hands-on skills to enter careers in the design, installation, manufacturing, testing, evaluation, technical sales, or maintenance of mechanical systems. The mechanical engineering technologist makes significant contributions in supporting engineering design, testing, production, research, and development operations in a wide variety of industrial, aerospace, and government organizations. Students must complete the coursework in major requirements and electives.

#### Mechanical Engineering Technology Mission Statement

The mission of the Mechanical Engineering Technology program in the BS in Engineering Technology degree is to prepare students to be competent in the area of applied mechanical engineering with potential growth in management and leadership.

#### Program Educational Objectives for Mechanical Engineering Technology

The program educational objectives of the BSET-Mechanical Engineering Technology Program describe the expected accomplishments of graduates during their first few years after graduation.

The main goal of the BSET-Mechanical Engineering Technology program at CMU is to provide a competitive curriculum and learning environment that prepare graduates who will be able to:

1. Attain employment and practice successfully in a mechanical engineering technology related profession;
2. Work in multi-disciplinary teams providing technical knowledge and effective communication as engineering technologists;
3. Remain technically current through continuous learning and self-improvement;
4. Understand and exhibit professional, ethical and social responsibility as they pursue their career.

(continued)



**Mechanical Engineering Technology Program Criteria**

In addition to the Engineering Technology Student Outcomes, graduates of the Mechanical Engineering Technology program will have demonstrated the following knowledge and/or skills:

1. application of principles of geometric dimensioning and tolerancing
2. use of computer aided drafting and design software
3. perform selection, set-up, and calibration of measurement tools/instrumentation
4. elements of differential and integral calculus
5. manufacturing processes;
6. material science and selection
7. solid mechanics (such as statics, dynamics, strength of materials, etc.)
8. mechanical system design
9. thermal sciences (such as thermodynamics, fluid mechanics, heat transfer, etc.)
10. electrical circuits (ac and dc), and electronic controls
11. application of industry codes, specifications, and standards
12. technical communications typically used in presentation of engineering proposals, reports, and specifications.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

The Mechanical Engineering Technology degree program consists of laboratory work that involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

Mechanical Engineering Technology majors must meet with an E&T advisor at least once a semester to discuss their progress in meeting the degree requirements. Prerequisites will be strictly enforced for all engineering technology coursework.

**Admission Requirements**

Any student in good academic standing at CMU may declare a major in any of the engineering or engineering technology majors. However, students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and engineering technology (IET) courses. Students wishing to substitute EGR or IET courses at 300 level or above must obtain pre-approval from the School Director unless those courses appear on CMU's What Will Transfer website: <https://netconnect.cmich.edu/whatwilltransfer>.

**Retention & Termination Standards**

In order to remain a major in Mechanical Engineering Technology, a student must meet the following criteria:

1. Students must select courses in consultation with an engineering technology advisor.
2. Students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and technology (IET) courses.
3. At least 30 credits of IET courses must be taken at CMU to graduate with this major.
4. If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

**Required Courses I (54 hours)**

EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)  
 EGR 489WI - Senior Design I 3(Spec)  
 EGR 499WI - Senior Design II 3(Spec)  
 IET 130 - Industrial Materials and Testing 3(2-2)  
 IET 154 - Engineering Design Graphics 3(2-2)  
 IET 170 - Manufacturing Processes I 3(1-4)  
 IET 181QR - Alternative Energy Analysis 3(2-2)  
 IET 226 - Parametric Design and Modeling 3(2-2)  
 IET 350 - Mechanism Design 3(3-0)  
 IET 352 - Applied Fluid Mechanics 3(3-0)  
 IET 356 - Thermodynamics 3(3-0)  
 IET 365 - Manufacturing Processes II 3(2-2)  
 IET 375 - Robotics 3(2-2)  
 IET 450 - Mechanical Computer-Aided Engineering 3(2-2)  
 IET 451 - Geometric Dimensioning and Tolerancing 3(2-2)  
 IET 453 - Heat Transfer 3(3-0)  
 IET 454 - Machine Design 3(2-2)  
 IET 472 - Instrumentation and Controls 3(2-2)

**Required Courses II (3 hours)**

Select one of the following:

EGR 251 - Engineering Statics 3(3-0)  
 IET 279 - Applied Statics 3(3-0)

**Required Courses III (3 hours)**

Select one of the following:

EGR 290 - Circuit Analysis I 3(3-0)  
 IET 291 - Applied Circuits 3(2-2)

**Required Courses IV (3 hours)**

Select one of the following:

EGR 253 - Engineering Dynamics 3(3-0)  
 IET 281 - Dynamics 3(3-0)

**Required Courses V (3 hours)**

Select one of the following:

EGR 255 - Strength of Materials 3(3-0)  
 IET 379 - Mechanics of Materials 3(3-0)

**Technical Electives (6 hours)**

Select 6 hours from the following:

EGR 120 - Introduction to Engineering 3(2-2)  
 IET 324WI - Product Design and Development 3(2-2)  
 IET 326 - Manufacturing Methods Analysis 3(3-0)  
 IET 327 - Industrial Safety 3(3-0)  
 IET 377 - Computer Numerical Control Programming 3(2-2)  
 IET 426 - Plant Layout and Materials Handling 3(3-0)  
 IET 428 - Manufacturing Quality 3(3-0)  
 IET 437 - Independent Study 2-5(Spec)  
 IET 458 - Surface Modeling 3(2-2)  
 IET 500 - Production Concepts 3(3-0)  
 MTH 133 - Calculus II 4(4-0)  
 STA 282QR - Introduction to Statistics 3(3-0)

**Total: 72 semester hours**

## Product Design Engineering Technology Major

*B.S.E.T. degree*

This major offers a program of coursework for students planning careers in Product Design and Development. Product design as a process is the efficient and effective development of ideas and concepts that lead to new products. Product Design Engineering Technology as a discipline overlaps the conceptual talents of industrial designers and the analytical knowledge required of engineers.

All Product Design Engineering Technology students are required to complete 60 hours of required courses. They also need to select and complete 6 credit hours of Technical Electives in consultation with an advisor.

### Product Design Engineering Technology Mission Statement

The mission of the Product Design Engineering Technology program in the BS in Engineering Technology degree is to prepare students to be competent in the area of product design with the potential for growth in management and leadership.

### Program Educational Objectives for Product Design Engineering Technology

The Program Educational Objectives (PEOs) of BSET-Product Design Engineering Technology (PDET) program at CMU describe the expected accomplishments of the BSET-PDET graduates during their first few years after graduation.

The main goal of the BSET-Product Design Engineering Technology program at CMU is to provide a competitive curriculum and learning environment that prepare graduates who will be able to:

1. Attain employment and practice successfully in a product design engineering technology related profession;
2. Work in multi-disciplinary teams providing technical knowledge and effective communication as engineering technologists;
3. Remain technically current through continuous learning and self-improvement;
4. Understand and exhibit professional, ethical and social responsibility as they pursue their careers.

### Product Design Engineering Technology Program Criteria

In addition to the Engineering Technology Student Outcomes, graduates of the Product Design Engineering Technology program will demonstrate knowledge and technical competency in:

1. use of 3D parametric computer-aided drafting and design software for a variety of mechanical drawing techniques (such as orthographic, section, auxiliary, assembly models, detailed working drawings and rendered images),
2. application of principals of geometric dimensioning and tolerancing,
3. application of principles of engineering materials and applied mechanics,
4. application of principles of manufacturing methods,
5. applications of calculus and statistics,
6. use of advanced 3D parametric modeling tools for design and analysis,
7. application of physics, materials, manufacturability, environmental and economic concepts to design of machine or mechanical elements,
8. use of industry codes, specifications, and standards (ASME, ANSI, or others),
9. technical communications typically used in preparation of engineering proposals, reports, and specifications.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

The engineering and technology degree programs consist of extensive laboratory work that involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety

guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

Students must meet with an E&T advisor at least once a semester to discuss their progress in meeting the degree requirements. Prerequisites will be strictly enforced for all engineering technology coursework.

A maximum of 6 semester hours of Credit/No Credit may be used on departmental majors (excluding computer, electrical and mechanical engineering) or minors. Credit/No Credit courses are identified in the Course Search & Registration.

### Admission Requirements

Any student in good academic standing at CMU may declare a major in any of the engineering or engineering technology majors. However, students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and engineering technology (IET) courses. Students wishing to substitute EGR or IET courses at 300 level or above must obtain pre-approval from the School Director unless those courses appear on CMU's What Will Transfer website: <https://netconnect.cmich.edu/whatwilltransfer>.

### Retention & Termination Standards

In order to remain a major in Product Design Engineering Technology, a student must meet the following criteria:

1. Students must select courses in consultation with an engineering technology advisor.
2. Students must maintain a cumulative GPA of 2.50 or higher to enroll in all 200-, 300-, and 400-level engineering (EGR) and technology (IET) courses.
3. At least 30 credits of IET courses must be taken at CMU to graduate with this major.
4. If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

### Required Courses (63 hours)

ART 106 - Introduction to Drawing 3(0-6)  
 EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)  
 EGR 489WI - Senior Design I 3(Spec)  
 EGR 499WI - Senior Design II 3(Spec)  
 IET 130 - Industrial Materials and Testing 3(2-2)  
 IET 154 - Engineering Design Graphics 3(2-2)  
 IET 170 - Manufacturing Processes I 3(1-4)  
 IET 181QR - Alternative Energy Analysis 3(2-2)  
 IET 226 - Parametric Design and Modeling 3(2-2)  
 IET 279 - Applied Statics 3(3-0)  
 IET 324 - Product Design and Development 3(2-2)  
 IET 350 - Mechanism Design 3(3-0)  
 IET 365 - Manufacturing Processes II 3(2-2)  
 IET 379 - Mechanics of Materials 3(3-0)  
 IET 424 - Human Factors and Ergonomics 3(3-0)  
 IET 450 - Mechanical Computer-Aided Engineering 3(2-2)  
 IET 451 - Geometric Dimensioning and Tolerancing 3(2-2)  
 IET 458 - Surface Modeling 3(2-2)  
 IET 466 - Advanced Surface Modeling 3(2-2)  
 MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 STA 282QR - Introduction to Statistics 3(3-0)

### Technical Electives (6 hours)

Select 6 semester hours of coursework from the following:

ART 119 - Design Foundations 3(0-6)  
 EGR 120 - Introduction to Engineering 3(2-2)  
 IET 281 - Dynamics 3(3-0)  
 IET 291 - Applied Circuits 3(2-2)  
 IET 377 - Computer Numerical Control Programming 3(2-2)  
 IET 454 - Machine Design 3(2-2)  
 MTH 133 - Calculus II 4(4-0)

**Total: 69 semester hours**

## Minor

### Industrial Technology Minor

*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

The Industrial Technology minor is available for students desiring to increase their understanding and competencies in industrial and engineering technology.

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#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

The engineering and technology degree programs consist of extensive laboratory work that involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

Students pursuing one of our majors or minors are required to meet with an ET advisor during the first semester of attendance at CMU.

A maximum of six semester hours of Credit/No Credit may be used on departmental majors (excluding computer, electrical and mechanical engineering) or minors. Credit/No Credit courses are identified in the Course Search & Registration. No more than 9 credit hours may be transferred in from other institutions to satisfy the requirements of the IT Minor.

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#### Required Courses (21 hours)

Students may select any combination of 21 semester hours from with the IET or EGR designators. Students may not apply course work from their declared major toward this minor.

**Total: 21 semester hours**

# Geography and Environmental Studies

(GEO, ESC, ENV, SEP)

For information, please contact the chairperson 989-774-3323, 296 B Dow Science Complex Science and Engineering;  
<https://www.cmich.edu/academics/colleges/college-science-engineering/departments-schools/geography-and-environmental-studies>

## Why Study Environmental Studies and Sustainability?

Environmental Studies prepares tomorrow's environmental leaders with a systematic, interdisciplinary, applied approach to tackling local and global environmental issues necessary for sustainability and resilience. The environmental challenges of today and the future require decisionmakers to understand the biophysical world – land, water, air, soil, and the human element - people's values and priorities, economic realities, communication styles, and policy. Environmental studies classes consider creative solutions to environmental challenges through discussions with professionals in the workforce, different genres of writing for environmental careers, hands-on technology, applied capstone projects, and the possibility of internships.

## Environmental Studies and Sustainability at CMU

The Environmental Studies major prepares tomorrow's leaders to promote excellence in environmental policy and practice in commercial, governmental, and non-profit organizations, as well as the broader global community, by providing quality interdisciplinary environmental knowledge, skills, tools, and awareness from local to global scales. Environmental Studies majors can start their careers in entry-level jobs such as development and redevelopment, environmental planning and zoning, parks and protected areas management, land management, sales representative, environmental partnership community specialist, conservation warden, green marketing, policy analysis, sustainability and resilience consultant, fundraiser, and environmental communication.

The Sustainability and Environmental Policy Minor prepares tomorrow's leaders to promote environmentally sustainable approaches in commercial, governmental, and nonprofit organizations for the betterment of current and future generations.

The programs also help prepare students for postgraduate admissions in programs nationwide such as environmental management, environmental policy, community resilience, sustainability, geography, forestry, natural resource management, environmental education, natural resource economics, business administration, public administration, advertising and public relations, architecture, landscape architecture, planning, environmental design programs, and environmental law. Departmental advisors provide advice to students regarding how to tailor curricular choices to future goals, and to help students to see how majors, minors, and certificates can complement one another.

## Why Study Geography?

A geographic perspective empowers decisionmakers to problem-solve questions of "where?" and "why?" In order to help make the world a better place, geographers research changing social and environmental systems through concepts of place and space. To accomplish this, geographers use an array of spatial research methods, ranging from geospatial technologies to quantitative and qualitative methods.

Geography's analysis of "where?" and "why?" are relevant to a wide array of professional endeavors. Geography students possess highly marketable spatial skills and find many career opportunities—Geospatial intelligence analyst, GIS analyst, international development specialist, urban and community planner, cartographer, natural resource manager, environmental consultant, climatologist, policy analyst, community and economic development specialist, transportation manager, real estate analyst, program manager, market analyst, user experience and user interface analyst, community outreach specialist, and educator.

## Geography at CMU

CMU offers a prominent Geography program and is recognized for strengths in geospatial technologies. The Geography and Environmental Studies Department offers a major in Geography, Geography major with a concentration in Geographic Information Sciences, a Geography major with a concentration in Urban and Community Planning, and a GIS minors in Geography and GIS. Two 15-hour undergraduate certificates are offered in Cartographic Design and Environmental Justice. The Department also offers an accelerated Master of Science in Geographic Information Sciences; students are encouraged to speak to a faculty member early in their undergraduate career regarding application information for the accelerated program.

Majors are required to take courses that cover content, concepts, and techniques of the discipline, while giving students flexibility to tailor electives to their interests. Departmental advisors offer students advice on classes, career paths, internships, undergraduate research, and extracurricular activities.

## Notes

**Advising.** Majors and minors should begin their program as early as possible because they may be advised to elect another major or minor in a related discipline. Majors should consult with their advisor regularly, including prior to registration.

**Graduate Study.** The Master of Science in Geographic Information Sciences is available. The Department also offers an accelerated Master of Science program. Refer to the College of Graduate Studies Bulletin or an advisor for additional information.

**Field trips.** Expenses for field trips may be prorated among class members.

**Student Teaching.** Students seeking the Geography and Environmental Studies Department's recommendation for student teaching must have: (1) a declared major in Geography, Social Studies – Geography concentration, or minor in Earth Science, (2) a minimum grade point average of 2.7 in the major/minor courses, (3) successful completion of GEO 400 or ESC 400 or SCI 400 or SCI 410, (4) completed a Geography and Environmental Studies Department application form, and (5) admission to the teacher preparation program.

**Transfer Credit.** Survey or introductory courses are accepted for not more than three (3) hours per course for majors and minors.

## The Faculty

Brian Becker, Anthony Feig, Mark Francek, Benjamin Heumann, Austin Jena Krause, Bin Li, Matthew Liesch (Chair), David Meyer, David Patton, James Pytko, Tyler Sonnichsen, Yong Tian, Xiaoguang Wang, Liann Yates, Tao Zheng



## Geography Major

*B.A.; B.S. degrees*

**Advisors:** Becker, Feig, Francek, Heumann, Li, Liesch, Patton, Tian, Wang, Zheng

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major, students must meet with a Geography and Environmental Studies faculty advisor.

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#### Required Courses I (12 hours)

GEO 105 - Physical Geography 3(2-2)  
 GEO 120 - Digital Earth: Understanding Environmental Change Using Maps 3(3-0)  
 GEO 121 - Human Geography and Globalization 3(3-0)  
 GEO 203QR - Introduction to Geographic Information Science 3(2-2)

#### Required Courses II (6 hours)

GEO 300 - Research Methods in Geography 3(3-0)  
 GEO 450 - Geography Capstone 3(3-0)

#### Required Courses III (3-9 hours)

Select from the following:  
 GEO 201 - Weather and Climate 3(2-2)  
 GEO 205/GEL 205 - Oceanography 3(3-0)  
 GEO 210 - Landforms 3(2-2)  
 GEO 310 - Surface Hydrology 3(2-2)  
 GEO 334/BIO 334 - Soil Science 3(2-2)  
 GEO 335 - Applied Conservation Geography 3(3-0)

#### Required Courses IV (3-9 hours)

Select from the following:  
 GEO 312 - Geography of Contemporary Global Issues 3(3-0)  
 GEO 317 - Economic Geography 3(3-0)  
 GEO 320 - Population Geography 3(3-0)  
 GEO 331 - Introductory Urban Planning 3(3-0)  
 GEO 340 - Urban Geography 3(3-0)  
 GEO 342 - Historical Geography 3(3-0)  
 GEO 345 - Political Geography 3(3-0)

#### Required Courses V (3-9 hours)

Select from the following:  
 GEO 315 - From Farm to Table: Food Systems in a Changing World 3(3-0)  
 GEO 325 - Geography of Growth and Change 3(3-0)  
 GEO 330 - Resource Perception and Utilization 3(3-0)  
 GEO 355 - Environmental Catastrophes 3(3-0)

#### Required Courses VI (3-9 hours)

Select from the following:  
 GEO 350 - United States and Canada 3(3-0)  
 GEO 365 - A Geography of Modern Europe 3(3-0)  
 GEO 373 - Latin America 3(3-0)  
 GEO 385 - China: Environment and People 3(3-0)  
 GEO 395 - Michigan 3(3-0)  
 GEO 515 - Environmental Management and Policy 3(3-0)

#### Electives (0-6 hours)

Select in consultation with and approval by a geography major advisor.

**Total: 36 semester hours**

## Geography Major: Geographic Information Science (GISCI) Concentration

*B.A.; B.S. degrees*

**Advisors:** Becker, Heumann, Li, Liesch, Tian, Wang, Zheng

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

In order to sign a Geography Major: Geographic Information Science Concentration, a student must meet with a Geography and Environmental Studies faculty advisor and successfully complete GEO 203QR with a "C" or better.

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#### Core Courses I (3 hours)

Select one of the following:  
 GEO 105 - Physical Geography 3(2-2)  
 GEO 120 - Digital Earth: Understanding Environmental Change Using Maps 3(3-0)  
 GEO 201 - Weather and Climate 3(2-2)  
 GEO 205/GEL 205 - Oceanography 3(3-0)  
 GEO 210 - Landforms 3(2-2)  
 GEO 334/BIO 334 - Soil Science 3(2-2)  
 GEO 335 - Applied Conservation Geography 3(3-0)

#### Core Courses II (3 hours)

Select one of the following:  
 GEO 121 - Human Geography and Globalization 3(3-0)  
 GEO 315 - From Farm to Table: Food Systems in a Changing World 3(3-0)  
 GEO 317 - Economic Geography 3(3-0)  
 GEO 320 - Population Geography 3(3-0)  
 GEO 340 - Urban Geography 3(3-0)  
 GEO 345 - Political Geography 3(3-0)

#### Core Courses III (3 hours)

Select one of the following:  
 GEO 346 - Geography of the Developing World 3(3-0)  
 GEO 350 - United States and Canada 3(3-0)  
 GEO 365 - A Geography of Modern Europe 3(3-0)  
 GEO 373 - Latin America 3(3-0)  
 GEO 385 - China: Environment and People 3(3-0)  
 GEO 395 - Michigan 3(3-0)

#### Required Courses (21 hours)

CPS 180 - Principles of Computer Programming 3(3-0)  
 GEO 203QR - Introduction to Geographic Information Science 3(2-2)  
 GEO 300 - Research Methods in Geography 3(3-0)  
 GEO 303 - Geographic Information Systems 3(2-2)  
 GEO 308 - Fundamentals of Remote Sensing 3(2-2)  
 GEO 450WI - Geography Capstone 3(2-2)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

#### Electives (15 hours)

Select from the following in consultation with and approval of GISci advisor. A maximum of 3 hours of GEO 591 and/or GEO 597 may be applied to the concentration.  
 GEO 500 - Advanced Cartography 3(2-2)  
 GEO 503 - Advanced Geographic Information Systems 3(2-2)  
 GEO 505 - Mapping and Surveying Technology: CAD, GPS, and UAS 3(2-2)  
 GEO 508 - Applications of Remote Sensing 3(2-2)  
 GEO 510 - Python Programming for GIS 3(2-2)  
 GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)  
 GEO 513 - Geographic Information Systems for Social Sciences 3(2-2)  
 GEO 528 - Environmental Modeling with GIS 3(2-2)  
 GEO 540 - Health Data Visualization 3(2-2)  
 GEO 553 - GIS Operations and Practices 3(3-0)  
 GEO 575 - Special Studies in Geography 1-6(Spec)  
 GEO 591 - Internship 1-12(Spec)  
 GEO 597 - Independent Study 1-9(Spec)

**Total: 45-46 semester hours**

## Geography Major: Urban and Community

### Planning Concentration

*B.A.; B.S. degrees*

**Advisors:** Francek, Liesch, Patton, Wang

The Geography Major: Urban and Community Planning Concentration prepares tomorrow's planning professionals, community leaders, and engaged citizens to promote sustainable communities by providing geographic knowledge, technical skills, teamwork, and communication.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major, students must meet with a Geography and Environmental Studies faculty advisor.

A minor is strongly recommended.

**Note:** Courses may be substituted only with the permission of an advisor.

#### Required Courses I (3 hours)

Select one of the following:

GEO 105 - Physical Geography 3(2-2)

GEO 120 - Digital Earth: Understanding Environmental Change Using Maps 3(3-0)

#### Required Courses II (27 hours)

GEO 121 - Human Geography and Globalization 3(3-0)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)

GEO 300 - Research Methods in Geography 3(3-0)

GEO 303 - Geographic Information Systems 3(2-2)

GEO 317 - Economic Geography 3(3-0)

GEO 331 - Introductory Urban Planning 3(3-0)

GEO 340 - Urban Geography 3(3-0)

GEO 431 - Urban Planning Capstone 3(3-0)

PSC 261 - State and Local Government 3(3-0)

**Note:** GEO 121 and GEO 431 may be offered as WI.

#### Required Courses III (3 hours)

Select one of the following:

STA 282QR - Introduction to Statistics 3(3-0)

STA 382QR - Elementary Statistical Analysis 3(3-0)

#### Electives (9 hours)

Select 9 hours from the two groups below:

##### Electives I (3-6 hours)

Select 3-6 hours from the following:

ENV 300 - Environmental Justice: Race, Gender, Poverty 3(3-0)

ENV 310 - Environmental Issues Management 3(3-0)

ENV 320 - Environmental Assessment and Practice 3(3-0)

ENV 360 - Water Resources Management 3(3-0)

GEO 320 - Population Geography 3(3-0)

GEO 325 - Resiliency of Socio-Ecological Systems 3(3-0)

GEO 330 - Resource Perception and Utilization 3(3-0)

GEO 332 - American Landscapes 3(3-0)

GEO 334/BIO 334 - Soil Science 3(2-2)

GEO 360 - Gender and Geography in the Midst of Globalization 3(3-0)

GEO 515 - Environmental Management and Policy 3(3-0)

PAD 210 - Introduction to Public Administration 3(3-0)

PAD 313 - Public Budgeting Processes 3(3-0)

PSC 513 - Citizen Engagement in Public Life 3(3-0)

##### Electives II (3-6 hours)

Select 3-6 hours from the following:

GEO 308 - Fundamentals of Remote Sensing 3(2-2)

GEO 500 - Advanced Cartography 3(2-2)

GEO 503 - Advanced Geographic Information Systems 3(2-2)

GEO 505 - Mapping and Surveying Technology: CAD, GPS, and UAS 3(2-2)

GEO 508 - Applications of Remote Sensing 3(2-2)

GEO 510 - Python Programming for GIS 3(2-2)

GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)

GEO 513 - Geographic Information Systems for Social Sciences 3(2-2)

GEO 528 - Environmental Modeling with GIS 3(2-2)

**Total: 42 semester hours**

## Environmental Studies Major

*B.A. and B.S. degrees*

**Advisors:** Becker, Feig, Francek, Heumann, Liesch

The Environmental Studies major prepares tomorrow's leaders to promote excellence in environmental policy and practice in commercial, governmental, and non-profit organizations, for the betterment of society, by providing interdisciplinary environmental knowledge, skills, and communication from local to global scales.

#### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To declare a major, students must meet with a Geography and Environmental Studies faculty advisor.

**Note:** It is recommended that students select a minor or undergraduate certificate in consultation with their major advisor.

#### Core Courses (21 hours)

ENS 101QR - Of Earth and Us: Introduction to Environmental Science 3(2-2)

ENV 101 - Introduction to Environmental Studies 3(3-0)

ENV 310 - Environmental Issues Management 3(3-0)

ENV 350 - Foundations of Environmental Thought 3(3-0)

ENV 400WI - Environmental Studies Capstone 3(3-0)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)

GEO 300 - Research Methods in Geography 3(3-0)

**Note:** ENV 101 may be offered as WI; Environmental Studies majors should take ENV 101 as WI.

#### Required Courses I (3-4 hours)

Select one of the following:

BIO 101 - General Biology 3(2-2)

BIO 105QR - Introductory Quantitative Biology 3(2-2)

BIO 111 - Foundations of Evolution and Diversity 4(3-3)

BIO 229 - Nature Study 3(2-3)

#### Required Courses II (4-5 hours)

Select one of the following:

CHM 120 - Survey of Chemistry 4(4-0)

CHM 131 - General Chemistry I 4(3-3)

CHM 161 - Principles of Chemistry 5(4-4)

#### Required Courses III (3 hours)

Select one of the following:

STA 282QR - Introduction to Statistics 3(3-0)

STA 382QR - Elementary Statistical Analysis 3(3-0)

#### Electives (18 hours)

**Note:** Electives I, II, and III should total to at least 18 credit hours.

##### Electives I (12-15 hours)

ENV 300 - Environmental Justice: Race, Gender, Poverty 3(3-0)

ENV 312 - Adapting to Our Changing Climate 3(3-0)

ENV 320 - Environmental Assessment and Practice 3(3-0)

ENV 360 - Water Resources Management 3(3-0)

ENV 365 - Energy and the Environment 3(3-0)

ENV 397 - Special Topics 1-6(Spec)

GEO 325 - Resiliency of Socio-Ecological Systems 3(3-0)

GEO 330 - Natural Resource Conflicts and Sustainable Development 3(3-0)

GEO 331 - Introductory Urban Planning 3(3-0)

GEO 332 - American Landscapes 3(3-0)

##### Electives II (0-6 hours)

ANT 350/BIO 350/CHM 350WI - Water as Life, Death, and Power 3(3-0)

ANT 370/SOC 370 - Global Environmental Issues 3(3-0)

BLR 521 - Environmental Law and Policy 3(3-0)

ECO 301 - Environmental Economics 3(3-0)

HSC 352 - Environmental Health 3(3-0)

HST 302 - Comparative Environmental History 3(3-0)

PSC 516 - Environmental Politics and Policy 3(3-0)

RPL 470 - Park and Natural Resource Management 3(3-0)

RPL 570 - Wilderness Issues and Policy 3(3-0)

(continued)

**Electives III (0-6 hours)**

BIO 334/GEO 334 - Soil Science 3(2-2)  
 GEL 308 - Hydrologic Processes 3(3-0)  
 GEO 201 - Weather and Climate 3(2-2)  
 GEO 303 - Geographic Information Systems 3(2-2)  
 GEO 308 - Fundamentals of Remote Sensing 3(2-2)  
 MET 301 - Climatology & Climate Change 3(3-0)

**Total: 49-51 semester hours**

## Interdisciplinary Major

### Integrated Science Major

*B.S. in Ed. degree, Secondary Standard Certificate*

This is an interdisciplinary major. Please check the index for the page number.

## Minors

### Geography Minor

*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

Advisors: Staff

**Required Courses I: Core Courses (12 hours)**

GEO 105 - Physical Geography 3(2-2)  
 GEO 120 - Digital Earth: Understanding Environmental Change Using Maps 3(3-0)  
 GEO 121 - Human Geography and Globalization 3(3-0)  
 GEO 203QR - Introduction to Geographic Information Science 3(2-2)

**Required Course II (3 hours)**

Select at least one of the following:

GEO 312 - Geography of Contemporary Global Issues 3(3-0)  
 GEO 315 - From Farm to Table: Food Systems in a Changing World 3(3-0)  
 GEO 317 - Economic Geography 3(3-0)  
 GEO 330 - Resource Perception and Utilization 3(3-0)  
 GEO 340 - Urban Geography 3(3-0)  
 GEO 342 - Historical Geography 3(3-0)  
 GEO 345 - Political Geography 3(3-0)  
 GEO 355 - Environmental Catastrophes 3(3-0)

**Required Course III (3 hours)**

Select at least one of the following:

GEO 346 - Geography of the Developing World 3(3-0)  
 GEO 350 - United States and Canada 3(3-0)  
 GEO 365 - A Geography of Modern Europe 3(3-0)  
 GEO 373 - Latin America 3(3-0)  
 GEO 385 - China: Environment and People 3(3-0)  
 GEO 395 - Michigan 3(3-0)

**Elective I (3 hours)**

Select three additional hours of Geography.

**Total: 21 semester hours**

### Geographic Information Sciences (GISci) Minor

*B.A.; B.A.A.; B.S. degrees*

Advisors: Becker, Heumann, Li, Patton, Tian, Wang, Zheng

The Geographic Information Sciences Minor provides both academic and technical training in the three major areas of the Geographic Information Sciences—cartography, GIS and remote sensing. This minor will emphasize both concepts and technical skills that will enable students to apply Geographic Information Sciences principles and techniques to their respective disciplines.

**Required Courses I (9 hours)**

GEO 203QR - Introduction to Geographic Information Science 3(2-2)  
 GEO 303 - Geographic Information Systems 3(2-2)  
 GEO 308 - Fundamentals of Remote Sensing 3(2-2)

**Required Courses II (3 hours)**

Select one of the following:

BIO 500 - Biological Statistics 3(2-2)  
 CPS 180 - Principles of Computer Programming 3(3-0)  
 GEL 420 - Applied Geostatistics 3(2-2)  
 STA 282QR - Introduction to Statistics 3(3-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

**Electives (9 hours)**

Select from the following:

GEO 500 - Advanced Cartography 3(2-2)  
 GEO 503 - Advanced Geographic Information Systems 3(2-2)  
 GEO 505 - Mapping and Surveying Technology: CAD, GPS, and UAS 3(2-2)  
 GEO 508 - Applications of Remote Sensing 3(2-2)  
 GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)  
 GEO 513 - Geographic Information Systems for Social Sciences 3(2-2)  
 GEO 528 - Environmental Modeling with GIS 3(2-2)  
 GEO 553 - GIS Operations and Practices 3(3-0)  
 GEO 575 - Special Studies in Geography 1-6(Spec)  
 GEO 591 - Internship 1-12(Spec)  
 GEO 597 - Independent Study 1-9(Spec)

**Note:** A maximum of 3 hours of GEO 591 and/or GEO 597 may be applied to the minor.

**Total: 21 semester hours**

### Geospatial Analytics Minor

Advisors: Heumann, Li

The Geospatial Analytics minor prepares students for data driven careers by integrating the geospatial and data sciences.

**Required Courses I - Data Science (10 hours)**

DAS 150QR - Introduction to Data Science 3(2-2)  
 DAS 260 - Data Integrity and Ethics 1(1-0)  
 DAS 350 - Exploratory Data Analytics 3(2-2)  
 DAS 450 - Applied Analytics I 3(3-1)

**Required Courses II - Data Visualization (2 hours)**

Select two of the following:

DAS 251 - Data Visualizations and Programming using Tableau 1(1-1)  
 DAS 252 - Data Visualization and Programming using R/RStudio 1(1-1)  
 DAS 253 - Data Visualization and Programming using SAS 1(1-1)  
 DAS 254/CPS 254 - Data Visualization and Programming Using Python 1(1-1)

**Required Courses III - Geographic Information Systems (3-6 hours)**

Select one of the following options:

**Option 1 (3 hours)**

GEO 501 - Principles of Geographic Information Systems 3(2-2)

**Option 2 (6 hours)**

GEO 303 - Geographic Information Systems 3(2-2)  
 GEO 308 - Fundamentals of Remote Sensing 3(2-2)

**Note:** Option 2 is for students who have already completed GEO 203QR.

**Required Courses IV - Geographic Information Science (6 hours)**

GEO 510 - Python Programming for GIS 3(2-2)  
 GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)

**Note:** these courses required CPS 180 and STA 382QR as prerequisites. Students with transfer credits that may apply to these prerequisites should contact their advisor.

**Electives (3 hours)**

Select one of the following:

GEO 500 - Advanced Cartography 3(2-2)  
 GEO 503 - Advanced Geographic Information Systems 3(2-2)  
 GEO 508 - Applications of Remote Sensing 3(2-2)  
 GEO 513 - Geographic Information Systems for Social Sciences 3(2-2)  
 GEO 528 - Environmental Modeling with GIS 3(2-2)

**Total: 24-27 semester hours**

## Sustainability and Environmental Policy Minor

*B.A., B.A.A., B.S., degrees*

**Advisors:** Becker, Feig, Francek, Heumann, Liesch

In an age of environmental uncertainty, sustainable policies have become more relevant than ever. The sustainability and environmental policy minor gives students powerful insights into some of today's most pressing problems and prepares students to tackle them.

### Required Courses I (6 hours)

ENV 101 - Introduction to Environmental Studies 3(3-0)

SEP 300QR - Sustainability and Environmental Policy 3(3-0)

**Note:** ENV 101 may be offered as WI.

### Required Courses II (3 hours)

Select one of the following:

PAD 210 - Introduction to Public Administration 3(3-0)

PAD 211 - Introduction to Nonprofit Leadership 3(3-0)

PAD 523WI - Fundamentals of Grant Writing and Management 3(3-0)

### Required Courses III (3 hours)

Select one of the following:

ENS 101QR - Of Earth and Us: Introduction to Environmental Science 3(2-2)

GEO 105 - Physical Geography 3(2-2)

**Note:** Students with a major or minor in Geology may substitute GEL 130 for Required Courses III. See faculty advisor.

### Electives (9 hours)

Select from Electives I and II for a total of 9 hours:

#### Electives I (3-6 hours)

Select from the following:

ENV 310 - Environmental Issues Management 3(3-0)

ENV 312 - Adapting to Our Changing Climate 3(3-0)

ENV 350 - Foundations of Environmental Thought 3(3-0)

GEO 325 - Resiliency of Socio-Ecological Systems 3(3-0)

GEO 330 - Natural Resource Conflicts and Sustainable Development 3(3-0)

GEO 335 - Applied Conservation Geography 3(3-0)

**Note:** ENV 312 and GEO 335 have prerequisites that are not listed on this minor.

#### Electives II (3-6 hours)

Select from the following:

ANT 350/BIO 350/CHM 350WI - Water as Life, Death, and Power 3(3-0)

ANT 370/SOC 370 - Global Environmental Issues 3(3-0)

HSC 352 - Environmental Health 3(3-0)

HST 302 - Comparative Environmental History 3(3-0)

PSC 516 - Environmental Politics and Policy 3(3-0)

RPL 470 - Park and Natural Resource Management 3(3-0)

RPL 570 - Wilderness Issues and Policy 3(3-0)

**Total: 21 semester hours**

## Interdisciplinary Minors

*Please check the index for the page number*

### Earth Science Minor

*B.S. in Ed. degree, Standard Secondary Certificate*

## Undergraduate Certificates

### Undergraduate Certificate - Cartographic Design

This undergraduate certificate is designed for all undergraduate students who desire to gain experience in graphic design and geographic information systems to create maps that are effective communication tools.

#### Required Courses (15 hours)

ART 125 - Digital Design 3(0-6)

ART 231 - Introduction to Graphic Design 3(0-6)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)

GEO 303 - Geographic Information Systems 3(2-2)

GEO 500 - Advanced Cartography 3(2-2)

**Total: 15 semester hours**

### Undergraduate Certificate - Environmental Justice

This undergraduate certificate is for all undergraduate students who want to address issues of social inequality based on race, gender, and poverty related to environmental issues facing society. Note: Only 12 credits can be applied to the Environmental Studies Major.

#### Required Courses (12 hours)

ENS 101QR - Of Earth and Us: Introduction to Environmental Science 3(2-2)

ENV 101 - Introduction to Environmental Studies 3(3-0)

ENV 300 - Environmental Justice: Race, Gender, Poverty 3(3-0)

ENV 350 - Foundations of Environmental Thought 3(3-0)

#### Electives (3 hours)

Select one of the following:

ANT 350/BIO 350/CHM350WI - Water as Life, Death, and Power 3(3-0)

ANT 370/SOC 370 - Global Environmental Issues 3(3-0)

HST 302 - Comparative Environmental History 3(3-0)

PHL 158 - Introduction to Environmental Ethics and Justice 3(3-0)

PSC 516 - Environmental Politics and Policy 3(3-0)

**Total: 15 semester hours**



## Mathematics (MTH)

For information, please contact the chairperson, 214 Pearce Hall; 989-774-3597  
E-mail: [math@cmich.edu](mailto:math@cmich.edu),  
[se.cmich.edu/mth](http://se.cmich.edu/mth)

### Why Study Mathematics?

What do the mathematical sciences involve? They all involve the study of patterns. Many, but not all, of these patterns involve numbers. Some of these patterns emerge from problems or situations in the world around us. Others emerge from considering how mathematical ideas fit together. People with a background in the mathematical sciences solve problems. Some mathematicians solve problems dealing with communications technology. Mathematics teachers help others learn about ideas in the mathematical sciences. As a mathematician, your problem-solving expertise will allow you to make contributions to many areas like business, industry, government, education, and more. The study of mathematics includes comprehensive training in thinking, reasoning, and problem-solving skills. These skills will strengthen your education, make you a well-rounded individual and enhance your appeal to employers worldwide.

### Mathematics at CMU

The Department of Mathematics provides a variety of programs. Depending on preference, a student may prepare to become a teacher of mathematics; study to become an applied mathematician; prepare for graduate work in mathematics; or earn a general liberal arts undergraduate degree with a major in mathematics. A minor program in mathematics is available for a student needing a concentration in mathematics to support their major. In addition, service courses are provided for programs throughout the university, and a number of courses meet the mathematics competency requirement.

### The Faculty

Ahmed Assaf, Debraj Chakrabarti, Jean Chan, Lisa DeMeyer, Ana Dias, Martha Frank, Thomas Gilsdorf, George Grossman, Yeonhyang Kim, Douglas A. Lapp, Meera Mainkar, Tibor Marcinek, Sivaram K. Narayan, Christine M. Phelps-Gregory, Katrina Piatek-Jimenez, Leela Rakesh, Ben Salisbury (Chair), Pete Vermeire, Jordan Watts, Dmitry Zakharov, Xiaoming Zheng

### Mathematics Major

*B.A.; B.S. degrees*

#### Required Courses I (27 hours)

MTH 132 - Calculus I 4(4-0)  
MTH 133 - Calculus II 4(4-0)  
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
MTH 233 - Calculus III 4(4-0)  
MTH 332 - Introduction to Mathematical Proof 3(3-0)  
MTH 334 - Differential Equations 3(3-0)  
MTH 499 - Capstone Course in Mathematics 3(3-0)  
MTH 523 - Abstract Algebra 3(3-0)

#### Required Courses II (3 hours)

Select one of the following:  
MTH 532 - Advanced Calculus I 3(3-0)  
MTH 545 - Introduction to Point-Set Topology 3(3-0)

#### Electives (6 hours)

Six (6) or more hours of electives are to be selected from MTH, STA, or CPS in consultation with and approved by a mathematics advisor and must be numbered MTH 296 or higher, STA 382QR or higher, or CPS 180 or higher. See notes on double counting.

MTH 175 (3) Discrete Mathematics may be included as an elective. If MTH 175 is included, then at least 33 hours of the total hours must be in mathematics or statistics.

#### Total: 36 semester hours

**Note:** See notes on double counting at the end of this section.

### Mathematics Minor

*B.A.; B.S. degrees*

#### Required Courses I (8 hours)

MTH 132 - Calculus I 4(4-0)  
MTH 133 - Calculus II 4(4-0)

#### Required Courses II (3 hours)

Select one of the following:  
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
MTH 232 - Linear Algebra and Differential Equations 3(3-0)

#### Electives (9 hours)

Select one of the following options:

##### Option 1 (9 hours)

If MTH 175 is included, then all other 6 elective hours must be in mathematics (MTH 233 or higher) or statistics (STA 382QR or higher).

##### Option 2 (9 hours)

If 3 CPS credits (CPS 150 or higher) are included, then all other 6 elective hours must be in mathematics (MTH 233 or higher) or statistics (STA 382QR or higher).

##### Option 3 (9 hours)

3 or more credits in mathematics (MTH 233 or higher), and 6 or less credits in statistics (STA 382 QR or higher).

**Note to all above options:** at most 3 credits can be from STA if Actuarial Science major is declared or if Statistics major or minor is declared.

#### Total: 20 semester hours

**Note:** See notes on double counting at the end of this section.

## Mathematics Major: Applied Mathematics Concentration

*B.A.; B.S. degrees*

The Concentration in Applied Mathematics is designed for mathematics students who plan to either enter graduate school after graduation from CMU or use mathematics as an adjunct skill in their professional life outside academe. This includes students planning to enter professions as wide-ranging as mathematical modeling, accounting and finance, actuary, computer programming, engineering, and a variety of positions within the health and social sciences.

### Core Courses (30 hours)

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 MTH 233 - Calculus III 4(4-0)  
 MTH 332 - Introduction to Mathematical Proof 3(3-0)  
 MTH 334 - Differential Equations 3(3-0)  
 MTH 499 - Capstone Course in Mathematics 3(3-0)  
 MTH 523 - Abstract Algebra 3(3-0)  
 MTH 532 - Advanced Calculus I 3(3-0)

### Required Courses (9 hours)

#### *Applied Mathematics Concentration*

Select three of the following:

MTH 438 - Numerical Analysis I 3(3-0)  
 MTH 520 - Optimization Theory 3(3-0)  
 MTH 534 - Applied Mathematics and Differential Equations 3(3-0)  
 MTH 586 - Operations Research I 3(3-0)

### Electives (3 hours)

Select from MTH, STA, or CPS courses in consultation with and the approval of a mathematics advisor. The course must be numbered MTH 400 or higher, STA 400 or higher, or CPS 180 or higher.

### Total: 42 semester hours

**Note:** See notes on double counting at the end of this section.

## Mathematics Major: Pure Mathematics Concentration

*B.A.; B.S. degrees*

The Concentration in Pure Mathematics is designed for mathematics students who plan to either enter graduate school after graduation from CMU or use mathematics as an adjunct skill in their professional life outside academe. This includes students planning to enter professions as wide-ranging as mathematical modeling, accounting and finance, actuary, computer programming, engineering, and a variety of positions within the health and social sciences.

### Core Courses (30 hours)

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 MTH 233 - Calculus III 4(4-0)  
 MTH 332 - Introduction to Mathematical Proof 3(3-0)  
 MTH 334 - Differential Equations 3(3-0)  
 MTH 499 - Capstone Course in Mathematics 3(3-0)  
 MTH 523 - Abstract Algebra 3(3-0)  
 MTH 532 - Advanced Calculus I 3(3-0)

### Required Courses (12 hours)

#### *Pure Mathematics Concentration*

Select four of the following:

MTH 436 - Elements of Complex Variables 3(3-0)  
 MTH 521 - Number Theory 3(3-0)  
 MTH 525 - Advanced Linear Algebra 3(3-0)  
 MTH 533 - Advanced Calculus II 3(3-0)  
 MTH 543 - Curves and Surfaces 3(3-0)  
 MTH 545 - Introduction to Point-Set Topology 3(3-0)  
 MTH 578 - Combinatorics and Graph Theory 3(3-0)

### Total: 42 semester hours

**Note:** See notes on double counting at the end of this section.

## Computational Mathematics and Analytics Minor

*B.A.; B.S. degrees*

The Computational Mathematics and Analytics Minor teaches students the basics of data analysis, real-world modeling, and numerical techniques for solving mathematical and data-involved problems.

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This minor can be taken in conjunction with the Data Science Major, or in conjunction with the Mathematics Major (with or without a concentration). It cannot be taken as a stand-alone minor.

### Required Courses I (22 hours)

DAS 150QR - Introduction to Data Science 3(2-2)  
 DAS 251 - Data Visualizations and Programming using Tableau 1(1-1)  
 DAS 252 - Data Visualization and Programming using R/RStudio 1(1-1)  
 DAS 253 - Data Visualization and Programming using SAS 1(1-1)  
 DAS 350 - Exploratory Data Analytics 3(2-2)  
 DAS 450 - Applied Analytics I 3(3-1)  
 MTH 233 - Calculus III 4(4-0)  
 MTH 334 - Differential Equations 3(3-0)  
 MTH 438 - Numerical Analysis I 3(3-0)

### Notes:

- If this minor is taken in conjunction with the Data Science BS, then MTH 223 must be taken as the linear algebra requirement in that major.
- MTH 233, 334, and 438 require MTH 132, 133, and 223; however, these are requirements in both the Mathematics BS and the Data Science BS already.

### Required Courses II (3 hours)

Select one of the following:

MTH 520 - Optimization Theory 3(3-0)  
 MTH 586 - Operations Research I 3(3-0)

### Total: 25 semester hours

**Note:** See notes on double counting at the end of this section

## Notes on Double Counting

- Note to students with Mathematics major and Statistics minor or Statistics major and Mathematics minor: these combinations are permitted only if another major or minor, other than Mathematics or Statistics, is also obtained.
- Note to students with Actuarial Science major and Mathematics minor: for this combination, student must take 6 hours of MTH or STA courses numbered 300 or above which are not counted toward the Actuarial Science major.
- Note to student with Mathematics major and Statistics major with Mathematics track: on the Mathematics major, at least 9 hours at the 300 level or above must not be counted on the Statistics major. Also, student must have major or minor other than Mathematics or Statistics.
- Note to students with the Mathematics Minor and the Computational Mathematics and Analytics (CM&A) Minor as part of the Data Science (DAS) Major: for this combination, the student must take 6 hours of MTH numbered 300 or above, STA numbered 392 or above, or CPS numbered 150 or above which are not counted toward the DAS Major nor the CM&A Minor.

## Teaching

### Teaching Mathematics Grades 5-12 Major

*B.S. in Ed. degree, Standard Secondary Certificate*

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#### ADMISSIONS REQUIREMENTS; RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of a 2.8 must be earned in the Teaching Mathematics Grades 5-12 Major.
2. Complete EDU 107 with a B- (2.7) or higher.
3. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
4. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.
5. To declare a major, students must have completed MTH 132 with a grade of B- or higher.

All professional education courses (MTH 260, MTH 265, MTH 360, & MTH 460) must be completed with a grade of C+ or better.

#### Required Courses (42 hours)

MTH 104/WGS 104 - Women in STEM Fields 3(3-0)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 175 - Discrete Mathematics 3(3-0)  
 MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 MTH 260 - Number and Algebraic Connections for Secondary Education 3(3-0)  
 MTH 265 - Measurement and Transformational Geometry in Secondary Education 3(3-0)  
 MTH 332 - Introduction to Mathematical Proof 3(3-0)  
 MTH 341 - College Geometry 3(3-0)  
 MTH 360 - Statistics and Probability for Secondary Education 3(3-0)  
 MTH 460 - Capstone on Teaching and Learning Mathematics for Secondary Education 4(Spec)  
 MTH 523 - Abstract Algebra 3(3-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)

#### Electives (3-4 hours)

Electives are to be selected from MTH in consultation with and approved by a mathematics advisor.

**Total: 45-46 hours**

### Teaching Mathematics Grades 7-12 Minor

*B.S. in Ed. degree, Standard Secondary Certificate*

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#### ADMISSIONS REQUIREMENTS; RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of a 2.8 must be earned in the Teaching Grades 7-12 Minor
2. Complete EDU 107 with a B- (2.7) or higher.
3. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
4. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.
5. To declare a minor, students must have completed MTH 132 with a grade of B- or higher.

All professional education courses (MTH 260, MTH 265, MTH 360, & MTH 460) must be completed with a grade of C+ or better.

#### Required Courses (36 hours)

MTH 104/WGS 104 - Women in STEM Fields 3(3-0)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 175 - Discrete Mathematics 3(3-0)  
 MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 MTH 260 - Number and Algebraic Connections for Secondary Education 3(3-0)  
 MTH 265 - Measurement and Transformational Geometry in Secondary Education 3(3-0)  
 MTH 332 - Introduction to Mathematical Proof 3(3-0)  
 MTH 341 - College Geometry 3(3-0)  
 MTH 360 - Statistics and Probability for Secondary Education 3(3-0)  
 MTH 460 - Capstone on Teaching and Learning Mathematics for Secondary Education 4(Spec)

**Total: 36 semester hours**

### Teaching Mathematics Grades 5-9 Minor

*B.S. in Ed. degree, Standard Secondary Certificate*

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#### ADMISSIONS REQUIREMENTS; RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of a 2.8 must be earned in the Teaching Mathematics Grades 5 - 9 Minor.
2. Complete EDU 107 with a B- or higher.
3. A minimum cumulative average of a 2.8 is required to complete the student teaching clinical experience.
4. Students must adhere to the Teacher Candidate Dispositions set by the Education Preparation Program.
5. To declare a minor, students must have completed MTH 132 with a grade of B- or higher.
6. All professional education courses (MTH 260, MTH 265, MTH 360, and MTH 460) must be completed with a grade of C+ or better.

#### Required Courses (26 hours)

MTH 104/WGS 104 - Women in STEM Fields 3(3-0)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 175 - Discrete Mathematics 3(3-0)  
 MTH 260 - Number and Algebraic Connections for Secondary Education 3(3-0)  
 MTH 265 - Measurement and Transformational Geometry in Secondary Education 3(3-0)  
 MTH 332 - Introduction to Mathematical Proof 3(3-0)  
 MTH 360 - Statistics and Probability for Secondary Education 3(3-0)  
 MTH 460 - Capstone on Teaching and Learning Mathematics for Secondary Education 4(Spec)

#### Electives (3-4 hours)

Electives (3-4 hours) are to be selected from MTH or STA in consultation with and approved by a mathematics advisor.

**Total: 29-30 semester hours**

# Physics

(PHY, AST, PHS)

For information, please contact the chairperson, 989-774-3321, 203 Dow Science Complex;  
<https://www.cmich.edu/academics/colleges/college-science-engineering/departments-schools/physics>

## Why Study Physics and Astronomy?

Physics is the basis of science and technology. The laws of physics describe the behavior of matter and energy and help us to understand the physical world. On the smallest scale, physicists study quarks, nuclei, atoms, and other basic constituents of matter. They also study the mechanical, electromagnetic, and thermal properties of solids, liquids, gases, and plasmas. On the grandest scale, physicists and astronomers study stars and galaxies, and apply physical principles to questions about the nature of the universe.

More than 50,000 physicists work in industry, educational institutions, state and federal government, and nonprofit research centers in the United States. Some perform basic research in physics, while others apply their knowledge to solve human problems in such areas as energy sources, climate change, medicine, transportation, communication, geology, and defense.

These researchers are supported by those who teach science and engineering, providing students with the problem-solving and laboratory skills necessary for tackling the challenges of the future. Physics teachers are prepared to instruct at the high school or college level, and many physicists are employed as university professors. Besides educating future physicists, our faculty provides students with the knowledge of physics that is required for such fields as medicine, engineering, technical writing, and environmental science.

## Physics and Astronomy at CMU

The Department of Physics offers physics and astronomy courses to serve the needs of a variety of students: those considering graduate studies or professional employment in physics and astronomy; those planning to teach physics or astronomy at colleges and secondary schools; those seeking to enter technical professions such as medicine or engineering that require a thorough understanding of physical concepts; and those planning to major in a non-technical discipline but desire an understanding of the fundamental processes that govern the physical environment.

A student can take a major or a minor in Physics. An Astronomy and Astrophysics Major is available for students intending to pursue graduate work in astronomy. For students headed for a teaching career, both the physics major and minor are available. Any student interested in a major or minor in physics should contact the chairperson as soon as possible to be assigned an advisor.

Undergraduate and graduate physics students have opportunities for individual research projects in the department's research laboratories: the Brooks Astronomical Observatory, the x-ray diffraction laboratory, the thin-films laboratory, and the nuclear physics laboratories for Penning-trap mass spectrometry and radiation detectors development. Opportunities also exist for research at national and international laboratories. Students may also choose to engage in computational physics research, in areas ranging from condensed matter and nuclear physics to astrophysics. This work is carried out on computer clusters located on campus and at high performance computing centers around the country.

The department's classrooms, laboratories, and faculty offices are located in the Leon and Frances McDermott wing of the Dow Science Complex. A large collection of physics and astronomy books is housed in the Park Library. There is a departmental study room in Dow 231, where tutors are available during the evening hours. Undergraduate physics and astronomy majors enjoy the use of a comfortable office space where they can meet and study together.

## Notes:

The Physics Department offers courses under three designators: PHY, PHS, AST. These courses are described in detail in the part of this Bulletin entitled "Course Descriptions". Physics and engineering students, as well as students of chemistry, meteorology, and geology, normally begin their study of physics with a calculus-based sequence. A separate introductory physics sequence based on trigonometry is offered for biology and pre-professional students.

## The Faculty

Fahim Ahmed, Veronica Barone (Chair), Alfredo Estrade, Marco Fornari, Mihai Horoi, Koblar Jackson, Aaron LaCluyze, Axel Mellinger, Chris Nelson, Juan Peralta, Georgios Perdikakis, Valeri Petkov, Matthew Redshaw, Christopher Tycner, and Glen Williams



## Physics Majors and Minors

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Several MTH courses are required as prerequisites for the physics courses listed below. Prospective majors are urged to begin their study of mathematics in the fall of the freshman year with MTH 132 (or MTH 130, if necessary), and to consult with a departmental advisor as soon as possible for help in scheduling additional MTH courses.

No more than 5 semester hours of credit taken on a credit/no credit basis may be counted toward the physics major or minor. Since the department permits credit/no credit registration only for beginning physics courses, the restriction refers specifically to PHY 145QR and 175.

Although not recommended, the following course substitutions can be allowed for a student who successfully completes PHY 247:

- PHY 130QR in place of 145QR,
- 131 for 146,
- 170 for 175,
- 171 for 176.

Transfer students from two-year colleges can complete a major in physics in two additional years if they have satisfactorily completed a one-year course in calculus and a one year course in general physics (preferably utilizing calculus). Transfer students should consult the chairperson of this department at their earliest opportunity, and in any case, prior to initial registration.

### Physics Teaching Majors and Minors

A minimum 2.7 GPA (B-) must be earned in all teaching majors and minors.

CHM 131 and 132 are prerequisites for one of the required courses for teaching majors and minors. Students should plan to take these courses early in their careers.

For students seeking the department's recommendation for student teaching in physics, the following requirements must be met:

1. At least 20 hours of physics (including PHY 505) must be completed with a minimum grade point average of 2.7.
2. At least 6 hours of physics (excluding PHY 505) must be completed at CMU.

## Majors

### Physics Major

*B.A., B.S. degrees*

### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information at the beginning of this section.

### Core Courses (36 hours)

PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY 176 - University Physics Laboratory II 1(0-2)  
 PHY 247QR - Introduction to Modern Physics 3(3-0)  
 PHY 277 - University Physics Laboratory III 1(0-3)  
 PHY 312 - Introduction to Mathematical Physics 3(3-0)  
 PHY 322 - Intermediate Mechanics 3(3-0)  
 PHY 332 - Electricity and Magnetism 3(3-0)  
 PHY 442 - Introductory Quantum Theory 4(4-0)  
 PHY 450 - Thermal Physics 3(3-0)  
 PHY 491WI - Senior Physics Project 3(Spec)  
 PHY 578WI - Experimental Physics 3(1-5)

### Electives (2 hours)

With the approval of an advisor, select courses having as prerequisite a course in the required major sequence.

### Cognate Courses (0-15 hours)

#### Mathematics Prerequisites

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 233 - Calculus III 4(4-0)  
 MTH 334 - Differential Equations 3(3-0)

**Note:** MTH 223 is a prerequisite for both MTH 233 and 334.

**Total: 38-53 semester hours**

## Astronomy and Astrophysics Major

*B.A., B.S. degrees*

This major is available for students with a particular interest in astronomy or astrophysics. This program provides the background desired by most astronomy graduate programs

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Several MTH courses are required as prerequisites for the physics courses listed below. Prospective majors are urged to begin their study of mathematics in the fall of the freshman year with MTH 132 (or MTH 130, if necessary), and to consult with a departmental advisor as soon as possible for help in scheduling additional MTH courses.

No more than 5 semester hours of credit taken on a credit/no credit basis may be counted toward the astronomy and astrophysics major. Since the department permits credit/no credit registration only for beginning physics courses, the restriction refers specifically to PHY 145QR and PHY 175.

Although not recommended, the following course substitutions can be allowed for a student who successfully completes PHY 247: PHY 130QR in place of PHY 145QR, PHY 131 for PHY 146, PHY 170 for PHY 175, PHY 171 for PHY 176.

Transfer students from two-year colleges can complete a major in Astronomy and Astrophysics in two additional years if they have satisfactorily completed a one-year course in calculus and a one-year course in general physics (preferably utilizing calculus). Transfer students should consult the chairperson of this department at their earliest opportunity, and in any case, prior to initial registration.

### Core Courses (36 hours)

PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY 176 - University Physics Laboratory II 1(0-2)  
 PHY 247QR - Introduction to Modern Physics 3(3-0)  
 PHY 277 - University Physics Laboratory III 1(0-3)  
 PHY 312 - Introduction to Mathematical Physics 3(3-0)  
 PHY 322 - Intermediate Mechanics 3(3-0)  
 PHY 332 - Electricity and Magnetism 3(3-0)  
 PHY 442 - Introductory Quantum Theory 4(4-0)  
 PHY 450 - Thermal Physics 3(3-0)  
 PHY 491WI - Senior Physics Project 3(Spec)  
 PHY 578WI - Experimental Physics 3(1-5)

### Required Courses (15 hours)

AST 260 - General Astronomy I 4(3-2)  
 AST 261 - General Astronomy II 4(3-2)  
 AST 562 - Observational Astronomy 4(3-3)  
 AST 563 - Astrophysics 3(3-0)

### Cognate Courses (0-15 hours)

#### Mathematics Prerequisites

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 233 - Calculus III 4(4-0)  
 MTH 334 - Differential Equations 3(3-0)

**Note:** MTH 223 is a prerequisite for both MTH 233 and 334.

**Total: 51-66 semester hours**

## Minor

### Physics Minor (Non-Teaching)

*B.S., B.A. degrees*

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### ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information at the beginning of this section.

### Required Courses (20 hours)

PHY 145QR - University Physics I 4(4-0)  
 PHY 146 - University Physics II 4(4-0)  
 PHY 175 - University Physics Laboratory I 1(0-2)  
 PHY 176 - University Physics Laboratory II 1(0-2)  
 PHY 247QR - Introduction to Modern Physics 3(3-0)  
 PHY 277 - University Physics Laboratory III 1(0-3)  
 PHY 322 - Intermediate Mechanics 3(3-0)  
 PHY 332 - Electricity and Magnetism 3(3-0)

### Elective (3 hours)

With the help of an advisor, select a minimum of three additional hours from courses having as prerequisite a course in the required major sequence.

### Cognate Courses (0-15)

#### Mathematics Prerequisites

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 233 - Calculus III 4(4-0)  
 MTH 334 - Differential Equations 3(3-0)

**Note:** MTH 223 is a prerequisite for both MTH 233 and 334.

**Total: 23-38 semester hours**

## Statistics, Actuarial and Data Sciences

(STA, ACT, DAS)

For information, please contact the chairperson, 105 Pearce Hall;

<https://www.cmich.edu/academics/colleges/college-science-engineering/departments-schools/statistics-actuarial-and-data-sciences>

### Why Study Statistics, Actuarial and Data Sciences?

Statisticians use data to make informed decisions. Actuaries find ways to manage risk. Data Scientists manage big data and search for insights from big data. As a statistician, actuary, or data scientist, your problem-solving expertise will allow you to make contributions to many areas such as business, industry, government, education, and more. The study of statistics, actuarial and data sciences include comprehensive training in thinking, reasoning, computing, and problem-solving skills. These skills will strengthen your education, make you a well-rounded individual and enhance your appeal to employers worldwide. Statistician, actuary and data scientist have become some of the most in-demand careers in the STEM field. The employment rate is projected to grow over 35% in statistics, 32% in Data Science and 25% in Actuarial Science from 2020 to 2030, and they are among the fastest growing professions by the U.S. Bureau of Labor Statistics. According to the *U.S. News & World Report's* "2021 Best Jobs Ranking," these three areas are ranked among the top ten best jobs.

### Statistics, Actuarial and Data Sciences at CMU

The Department of Statistics, Actuarial and Data Sciences provides a major (B.A. or B.S.) and minor in statistics and a major (B.A. or B.S.) in actuarial science, and a major (B.S.) in Data Science and a minor in Actuarial and Risk Analytics. Depending on preference, a student may prepare to become an actuary, statistician or data scientist, or prepare for graduate work in statistics or data science. The Actuarial major offers courses to prepare students for the actuarial Exam P, Exam FM, Exam SRM, and Exam LTAM administered by the Society of Actuaries (SOA) or the Casualty Actuarial Society (CAS).

The graduate programs include a Ph.D. in Statistics and Analytics, an M.S. in Applied Statistics and Analytics, a Graduate Certificate in Data Mining and a Graduate Certificate in Actuarial Science. Requirements for graduate programs are detailed in the *Graduate Studies Bulletin*.

In addition, service courses are provided for programs throughout the university, and a number of courses meet the mathematics competency and quantitative reasoning requirements.

### The Faculty

Mohamed Amezziane, Chin-I Cheng, Kahadawala Cooray, John Daniels, Felix Famoye (Chair), Carl Moun-Shen Lee, Jungsywan Sepanski, Min Shu, Daniel X. Wang

### Statistics Major

B.A.; B.S. degrees

#### ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS

**Note to students with Mathematics major and Statistics minor or Statistics major and Mathematics minor:** these combinations are permitted only if another major or minor is also obtained.

**Note to student with Mathematics major and Statistics major with Mathematics track:** on the Mathematics major, at least 9 hours at the 300 level or above must not be counted on the Statistics major. Also, student must have an outside major or minor.

**Note to students with Statistics major with Application track:** Student must have a minor in an area other than Mathematics or another major.

#### Required Courses (37 hours)

DAS 260 - Data Integrity and Ethics 1(1-0)  
 DAS 350 - Exploratory Data Analytics 3(2-2)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 MTH 233 - Calculus III 4(4-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)  
 STA 575 - Statistical Programming for Data Management and Analysis 3(3-0)  
 STA 580 - Applied Statistical Methods I 3(3-0)  
 STA 584 - Mathematical Statistics I 3(3-0)  
 STA 585 - Mathematical Statistics II 3(3-0)  
 STA 590 - Applied Statistical Methods II 3(3-0)

#### Required Courses II (2 hours)

Select two of the following:  
 DAS 251 - Data Visualizations and Programming using Tableau 1(1-1)  
 DAS 252 - Data Visualization and Programming using R/RStudio 1(1-1)  
 DAS 254/CPS 254 - Data Visualization and Programming Using Python 1(1-1)

### Other Requirements (6 hours)

Select one of the following options:

#### Option A (6 hours)

Mathematics Track - recommended for students who plan to do graduate study.

MTH 332 - Introduction to Mathematical Proof 3(3-0)

MTH 532 - Advanced Calculus I 3(3-0)

#### Option B (6 hours)

Select hours from the courses in which statistics has a natural application from a discipline other than ACT, MTH or STA. These courses may not be double counted as general education courses nor courses required by the minor that a student is taking. The track and courses must be approved by an advisor in the Department of Statistics, Actuarial and Data Sciences.

### Electives (6 hours)

Select from the following:

STA 582 - Experimental Designs 3(3-0)

STA 583 - Nonparametric Statistics 3(3-0)

STA 586 - Clinical Trials and Survival Analysis 3(3-0)

STA 587 - Statistical Theory and Methods for Quality Improvement 3(3-0)

STA 588 - Sampling Techniques 3(3-0)

STA 589 - Time Series Forecasting 3(3-0)

STA 591 - Data Mining Techniques I 3(3-0)

STA 592 - Six Sigma: Foundations and Techniques for Green Belts 3(3-0)

STA 595 - Introduction to Bayesian Statistics 3(3-0)

STA 596 - Special Topics in Statistics 1-6(Spec)

STA 597 - Independent Study 1-6(Spec)

### Total: 51 semester hours

**Note:** See notes on double counting at the end of this section.

## Actuarial Science Major

B.A.; B.S. degrees

### Why Study Actuarial Science?

Actuaries are business professionals who use their mathematical, statistical, and business management skills to assess risk and uncertainty. About 70% of actuaries work for insurance companies; about 25% for consulting firms, and about 5% for government agencies. The actuarial employment rate is projected to grow 25% from 2020 to 2030, and it is one of the fastest growing professions in business jobs.

### Actuarial Science at CMU

The major offers courses to prepare students for the actuarial Exam P, Exam FM, Exam SRM, and Exam LTAM administered by the Society of Actuaries (SOA) or the Casualty Actuarial Society (CAS). All of the courses required to fulfill the SOA/CAS Validation by Education Experience (VEE) are offered at CMU, and those courses are required for the Actuarial Science major. Students should try to pass at least two exams by the time they graduate from CMU. The major also provides coursework to prepare a graduate for a career in the business world in which the insurance industry is the focus. More direct contact with actuaries comes through the student organization Gamma Iota Sigma.

This major consists of 65 hours of course work in mathematics, statistics, accounting, economics, finance, and computer science. The major is designed to give the student the type of background necessary to pursue a career in actuarial science and, in particular, to prepare the student to pass four actuarial exams. There is no required minor. Advisors are from the Department of Statistics, Actuarial and Data Sciences.

### ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS

As early as possible, a student interested in actuarial science should contact an actuarial science advisor from the Statistics, Actuarial and Data Sciences Department. It is important to get through the calculus sequence as soon as possible in order to give the student the maximum opportunity to pass actuarial exams.

**Note to students with Actuarial Science major and Mathematics major or Mathematics minor:** for this combination, student must take 6 hours of MTH or STA courses numbered 300 or above which are not counted toward the Actuarial Science major.

### Required Courses I (52 hours)

ACC 201 - Concepts of Financial Accounting 3(3-0)  
 ACT 539 - Probability Foundations of Actuarial Science 3(3-0)  
 ACT 540 - Mathematical Theory of Interest 3(3-0)  
 ACT 544 - Statistics for Risk Modeling 4(4-0)  
 ECO 201 - Principles of Macroeconomics 3(3-0)  
 ECO 202 - Principles of Microeconomics 3(3-0)  
 FIN 332 - Managerial Finance 3(3-0)  
 MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)  
 MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 MTH 233 - Calculus III 4(4-0)  
 STA 575 - Statistical Programming for Data Management and Analysis 3(3-0)  
 STA 580 - Applied Statistical Methods I 3(3-0)  
 STA 584 - Mathematical Statistics I 3(3-0)  
 STA 585 - Mathematical Statistics II 3(3-0)  
 STA 589 - Time Series Forecasting 3(3-0)

### Required Courses II (4 hours)

CPS 106 - Spreadsheet Concepts 1(1-0)  
 CPS 180 - Principles of Computer Programming 3(3-0)

### Electives (9 hours)

Select three of the following in consultation with the advisor:  
 ACT 541 - Actuarial Mathematics for Life Contingencies I 3(3-0)  
 ACT 542 - Actuarial Mathematics for Life Contingencies II 3(3-0)  
 BIS 360WI - Applied Business Communication 3(3-0)  
 FIN 317 - Insurance Planning 3(3-0)  
 MTH 332 - Introduction to Mathematical Proof 3(3-0)  
 STA 590 - Applied Statistical Methods II 3(3-0)  
 STA 591 - Data Mining Techniques I 3(3-0)  
 STA 592 - Six Sigma: Foundations and Techniques for Green Belts 3(3-0)  
 STA 595 - Introduction to Bayesian Statistics 3(3-0)

**Total: 65 semester hours**

## Data Science Major

B.S. degree

### Why Study Data Science at Central Michigan University?

Data Science is the career of the future. The advancement of modern technology has transformed our world into a digital universe, where data is created at an astonishing rate. There is exponentially increasing professional demand for individuals with advanced knowledge and skills in data science that greatly outstrips the availability of graduates. Industries are becoming data-driven and new innovations are being made every day. In the modern advanced technological society, the new driving force behind industries is Data. Companies require data to function, grow and improve their businesses. Data Scientists deal with the big and messy data in order to assist companies in making proper decisions.

The program is designed to equip students with knowledge and skills in data management, computing and analytics modeling techniques to meet the ever-increasing demand by business/industry for individuals with such training. Besides the knowledge and skills for solving real world data science projects, the program will equip students with strong communication skills required to work effectively with teams and clients.

### ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS

Students can sign a major at any time. They should contact a data science advisor in the Department to plan their coursework map. To progress through the program, it is important to get through some foundational courses such as MTH 132, MTH 133, CPS 180, STA 382QR and DAS 150QR as early as possible. The University requires that students have a signed major at 56 credit hours. To declare a major, students must have completed MTH 132, CPS 180 and an Introductory Statistics course, such as STA 382QR, with an average GPA of these three courses at 2.7 (B-) or better.

Students majoring in Data Science also need to select an analytics minor in an application discipline. Students who signed the data science major should select and sign an analytics minor with the department offering the minor during their first or second year in the program.

These minors along with the corresponding department are:

- Actuarial and Risk Analytics (Statistics, Actuarial and Data Science)
- Biological Analytics (Biology)
- Computational Mathematics & Analytics (Mathematics)
- Data Engineering (Computer Science)
- Environmental Analytics (Earth & Atmospheric Sciences)
- Geo-Spatial Analytics (Geography & Environmental Studies)

### Responsibility and Ethics (2 hours)

CPS 301 - Social Issues of Computing and Professional Practice 1(1-0)  
 DAS 260 - Data Integrity and Ethics 1(1-0)

### Mathematical Foundations I (8 hours)

MTH 132 - Calculus I 4(4-0)  
 MTH 133 - Calculus II 4(4-0)

### Mathematical Foundations II (3 hours)

Select one of the following:

MTH 223 - Linear Algebra and Matrix Theory 3(3-0)  
 MTH 232 - Linear Algebra and Differential Equations 3(3-0)

### Computational Foundations (9 hours)

CPS 180 - Principles of Computer Programming 3(3-0)  
 CPS 285 - Programming for Data Science 3(3-0)  
 ITC 341 - Introduction to Databases and Applications 3(3-0)

### Statistical Foundations (9 hours)

STA 382QR - Elementary Statistical Analysis 3(3-0)  
 STA 580 - Applied Statistical Methods I 3(3-0)  
 STA 581 - Probability and Statistics for Data Science 3(3-0)

**Note:** any of STA 282QR, STA 392, PSY 211QR, GEO 512, BIO 500, HSC 544 may be counted instead of STA 382QR to satisfy this course requirement.

(continued)



**Data Science Core Courses (15 hours)**

DAS 150QR - Introduction to Data Science 3(2-2)  
 DAS 350 - Exploratory Data Analytics 3(2-2)  
 DAS 450 - Applied Analytics I 3(3-1)  
 DAS 460 - Applied Analytics II 3(3-1)  
 DAS 495 - Capstone/Practicum 3(3-0)

**Data Science Core Courses II (3 hours)**

Select three of the following:

DAS 251 - Data Visualizations and Programming using Tableau 1(1-1)  
 DAS 252 - Data Visualization and Programming using R/RStudio 1(1-1)  
 DAS 253 - Data Visualization and Programming using SAS 1(1-1)  
 DAS 254/CPS 254 - Data Visualization and Programming Using Python 1(1-1)

**Electives (6 hours)**

Select from the following:

CPS 525 - Introduction to Text Mining 3(3-0)  
 CPS 580 - Supervised Machine Learning 3(3-0)  
 ITC 441 - Database and Virtual Data Server Administration 3(3-0)  
 STA 575 - Statistical Programming for Data Management and Analysis 3(3-0)  
 STA 582 - Experimental Designs 3(3-0)  
 STA 583 - Nonparametric Statistics 3(3-0)  
 STA 589 - Time Series Forecasting 3(3-0)  
 STA 591 - Data Mining Techniques I 3(3-0)  
 STA 595 - Introduction to Bayesian Statistics 3(3-0)

**Total: 55 semester hours**

**Actuarial and Risk Analytics Minor**

*B.A., B.S. degrees*

The actuarial data typically found in insurance industries and other organizations is emerging at an astonishing rate due to the advancement of modern technology. Based on such data, risk analytics identify, measure, and mitigate various risk exposures or hazards facing a business, investment, or project to minimize the likelihood of future adverse effect of occurring. Therefore, it is an increasing professional demand for individuals with advanced knowledge and skills in risk analysis for actuarial data that greatly outstrips the availability of graduates.

**ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS**

To sign a minor in Actuarial and Risk Analytics, students must be majoring in Statistics, Data Science or Actuarial Science with a minimum overall GPA 2.5 or higher. For students who are interested in this minor, but not in these three majors, please consult with the academic advisor of this minor before taking courses from the minor requirements.

- **Statistics majors:** The Statistics majors can complete the ARA minor by taking DAS 150QR, DAS 253, DAS 450, and all the courses under Required Courses II given below. In addition, Statistics majors do require to select STA 589 as one of their electives.
- **Data Science majors:** The Data Science majors can complete the ARA minor by taking all the courses under Required Courses II given below. In addition, Data Science majors do require to select STA 589 as one of their electives.
- **Actuarial Science majors:** The Actuarial Science majors can complete the ARA minor by taking all the courses under Required Courses I given below.
- **Double majors in Statistics and Data Science:** The Statistics and the Data Science double majors can complete the ARA minor by taking all the courses under Required Courses II given below. In addition, they do require to select STA 589 as one of their electives.
- **Double majors in Statistics and Actuarial Science:** The Statistics and the Actuarial Science double majors can complete the ARA minor by taking DAS 150QR, DAS 253 and DAS 450.
- **Double majors in Data Science and Actuarial Science:** The Data Science and the Actuarial Science double majors automatically have all courses for the ARA minor.

**Required Courses I (9 hours)**

DAS 150QR - Introduction to Data Science 3(2-2)  
 DAS 350 - Exploratory Data Analytics 3(2-2)  
 DAS 450 - Applied Analytics I 3(3-1)

**Required Courses II - Data Science (3 hours)**

Select three of the following:

DAS 251 - Data Visualizations and Programming using Tableau 1(1-1)  
 DAS 252 - Data Visualization and Programming using R/RStudio 1(1-1)  
 DAS 253 - Data Visualization and Programming using SAS 1(1-1)  
 DAS 254/CPS 254 - Data Visualization and Programming Using Python 1(1-1)

**Required Courses III (13 hours)**

ACC 201 - Concepts of Financial Accounting 3(3-0)  
 ACT 540 - Mathematical Theory of Interest 3(3-0)  
 ACT 544 - Statistics for Risk Modeling 4(4-0)  
 FIN 332 - Managerial Finance 3(3-0)

**Total: 25 semester hours**

**Statistics Minor**

*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

A substitution of any course must be approved by a statistics minor advisor in the Department of Statistics, Actuarial and Data Sciences prior to taking the course. See note on double counting.

**ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS**

**Note to students with Mathematics major and Statistics minor or Statistics major and Mathematics minor:** these combinations are permitted only if another major or minor is also obtained.

**Required Courses (13 hours)**

MTH 132 - Calculus I 4(4-0)  
 STA 382QR - Elementary Statistical Analysis 3(3-0)  
 STA 575 - Statistical Programming for Data Management and Analysis 3(3-0)  
 STA 580 - Applied Statistical Methods I 3(3-0)

**Electives (9 hours)**

Nine or more hours of electives are to be selected from statistics courses at the 500 level or above with the approval of a statistics minor advisor.

**Total: 22 semester hours**

**Note:** See notes on double counting at the end of this section.

**Notes on Double Counting**

- Note to students with Mathematics major and Statistics minor or Statistics major and Mathematics minor: these combinations are permitted only if another major or minor is also obtained.
- Note to students with Actuarial Science major and Mathematics major or Mathematics minor: for this combination, student must take 6 hours of MTH or STA courses numbered 300 or above which are not counted toward the Actuarial Science major.
- Note to student with Mathematics major and Statistics major with Mathematics track: on the Mathematics major, at least 9 hours at the 300 level or above must not be counted on the Statistics major. Also, student must have an outside major or minor.
- Note to students with Statistics major with Application track: Student must have a minor in an area other than Mathematics or another major.

# Course Descriptions «

## Key to Designators

AAD	- Academic Advancement	HSC	- School of Health Sciences
ACC	- Accounting	HSL	- Health Systems Leadership
ACT	- Actuarial Science	HST	- History
ANT	- Anthropology	HUM	- Humanities
ARB	- Arabic	IET	- Industrial and Engineering Technology
ART	- Art	IGR	- Intergroup Relations and Justice
ASL	- American Sign Language	IND	- Interior Design
AST	- Astronomy	IPR	- Integrative Public Relations
ATR	- Athletic Training	IPS	- International Program Studies
AUD	- Audiology	ITC	- Information Technology
BCA	- Broadcast and Cinematic Arts	JPN	- Japanese
BIO	- Biology	JRN	- Journalism
BIS	- Business Information Systems	LAR	- Liberal Arts
BLR	- Business Law and Regulation	LAT	- Latin
BUS	- Business	LDR	- Leadership Studies
CDE	- Planned Experience	LIB	- Library
CDO	- Communication Disorders	LMT	- Library, Media & Technology
CED	- Counselor Education and Personal Development	MAR	- Marine Science
CGL	- Cultural and Global Studies	MBA	- Master of Business Administration
CHM	- Chemistry	MCA	- Media and Cinematic Arts
CHN	- Chinese	MDP	- Media, Design, and Production
CNE	- Credit, no equivalent	MED	- College of Medicine
COM	- Communication	MET	- Meteorology
CPS	- Computer Science	MGT	- Management
CRM	- Cultural Resource Management	MHA	- Master of Health Administration
CSD	- Communication Sciences and Disorders	MKT	- Marketing
DAN	- Dance	MLE	- Middle Level Education
DAS	- Data Science	MMD	- Multimedia Design
DBI	- DeafBlind Intervener	MPH	- Master of Public Health
DHA	- Degrees in Health Administration	MSA	- Master of Science in Administration
DOL	- Doctor of Organizational Leadership	MSL	- Military Science and Leadership
ECE	- Early Childhood Education	MST	- Museum Science
ECO	- Economics	MTH	- Mathematics
EDL	- Educational Leadership	MTR	- Music Theatre
EDU	- Teacher Education	MUS	- Music
EES	- Earth and Ecosystem Science	NDS	- Nutrition and Dietetics
EGR	- Engineering	NSC	- Neuroscience
EHS	- Education and Human Services	NUR	- Nursing
ELI	- English Language Institute	OJB	- Ojibwe
ENG	- English Language and Literature	PAD	- Public and Nonprofit Administration
ENS	- Environmental Science	PED	- Sports Instructional Program (Activity)
ENT	- Entrepreneurship	PES	- Physical Education and Professional Courses
ENV	- Environmental Studies	PHA	- Physician Assistant
ESC	- Earth Science	PHL	- Philosophy
FIN	- Finance	PHS	- Physical Science
FLN	- Foreign Language	PHY	- Physics
FMD	- Fashion Merchandising & Design	POR	- Portuguese
FNS	- Foods & Nutrition	PSC	- Political Science
FRN	- French	PSY	- Psychology
FYE	- First Year Experience	PTH	- Physical Therapy
GAM	- Game Design Thinking	REL	- Religion
GEL	- Geology	RLA	- Recreation and Leisure Activities
GEO	- Geography	RPL	- Recreation, Parks, and Leisure Services Administration
GER	- German	RUS	- Russian
GRK	- Greek	SAM	- Science of Advanced Materials
GRN	- Gerontology	SCI	- Sciences
HAN	- Human Anatomy	SCJ	- Social and Criminal Justice
HDF	- Human Development & Family Studies	SEP	- Sustainability and Environmental Policy
HED	- Higher Education	SLP	- Speech-Language Pathology
HNS	- Environmental Health and Safety	SOC	- Sociology
HOA	- Hotel Administration (AT UNLV)	SPE	- Special Education
HON	- Honors	SPN	- Spanish
HPE	- Health and Physical Education	SSC	- Social Sciences
HPS	- Health Professions	STA	- Statistics
HSA	- Hospitality Services Administration	SWK	- Social Work
		TAI	- Theatre and Interpretation
		TEL	- Teaching English Language
		UNV	- Prior Learning
		WGS	- Women and Gender Studies

## Key to Course Descriptions

**Course Numbers.** The level of a course is indicated by the number. Usually it is expected that students will take courses appropriate to their classification. It is particularly important for freshmen to register for courses numbered below 200.

000-099	Credits in these courses do not apply to the minimum 124 hour requirement for graduation.
100-199	Primarily for Freshmen
200-299	Primarily for Sophomores
300-399	Primarily for Juniors
400-499	Primarily for Seniors
500-599	Advanced Undergraduate Courses

A student who has been formally admitted to Graduate Studies and who takes courses numbered 500 or higher will receive graduate credit and, with the approval of the advisor, may apply it to a degree program.

**600-699 Graduate Courses.** Open only to students who have been admitted to Graduate Studies. Undergraduate students should use the form available from the office of Graduate Studies website to apply to take a graduate course for undergraduate credit.

**700-799 Graduate Courses.** Open only to students who have been admitted to Graduate Studies.

**800-899 Graduate Courses.** Open only to students who have been admitted to Graduate Studies and who are in the third year of doctoral study or full time internship at the specialist level.

**900-999 Graduate Courses.** Open only to students who have been admitted to Graduate Studies and who are in the fourth year of doctoral study.

Graduate courses which are subject to limitation under the policy on unspecified content or variable credit are listed in each department.

## Cross-Listed Courses

Cross-listed courses are those courses identified in the course listing as "identical to" another course. Credit may not be earned in more than one of these courses.

## Credit and Attendance Hours

Central Michigan University complies with the federal credit hour definition. *"one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester"* 34CFR 600.2 (11/1/2010). This credit policy applies to all courses regardless of the delivery format. Laboratory, internship, practica, studio, and similar non-lecture courses will require at least an equivalent amount of work.

The number of semester hours of credit in each course is indicated by the first number following the title of the course. Within the parentheses, the first number indicates the number of hours of lecture per week; the second number, the hours of laboratory per week. EXAMPLE: 4(3-2) means four hours of credit, three hours of lecture, 2 hours of laboratory.

## Prerequisites

Some courses listed as prerequisites may have their own prerequisites. You may need to plan more than one semester in advance when deciding which semester to take a particular course. Students seeking to substitute prerequisite courses with equivalents or permission of instructor may do so only with departmental approval. Such substitutions are not automatic.

## Definitions

- **Prerequisite** – Any course(s) and/or other requirement(s) that must be completed prior to enrolling in a particular course.
- **Pre/Co-requisite(s)** – Any course and/or other requirement(s) that students may take prior to, or concurrently, with the particular course.
- **Co-requisite** – Any course and/or other requirement(s) that students must take concurrently with a particular course.
- **Recommended** – Any course and/or other requirement(s) that might be useful for students to complete prior to enrolling in a particular course.

## Syntax Guidelines

- Multiple Course Requirements are separated by a comma. Example: ART 105, ART 115.
- Compound requirements are separated by a semi-colon. Example: ART 105, ART 115; admission to the Teacher Education program.
- Alternative courses are separated by "or." Example: ART 105 or ART 115.
- Multiple alternative courses are preceded by the use of "One of:." Example: One of: ART 105, ART 115, ART 215.
- Default prerequisites. "or permission of instructor" and "or equivalent" are default prerequisites and therefore apply to any course. It is understood that students may contact a faculty member for permission to register for a class (with a bump card) or have previous coursework evaluated for equivalency (with a bump card). Thus, these phrases should not appear in course descriptions.
- "Or graduate standing" should appear only in 500 level classes to permit graduate students to register without CMU's undergraduate requirements.

## Variable Credit Courses

Variable credit courses are indicated by a semester-hour designation such as 1-3(Spec). (Spec) means there are special arrangements regarding the number of hours spent in class. Maximum hours which a student may earn in a variable credit course to apply toward graduation are the highest number in the semester-hour designation for the course (i.e., three hours maximum in example listed above).

## Course Modality Definitions

**Online Asynchronous.** Online asynchronous courses are completely online with no required meeting days and times, but may offer optional synchronous meetings. All formalized instruction and coursework are completed online. Students will complete assignments by established deadlines. Proctored or monitored exams may be required.

**Online Synchronous.** Online synchronous courses are completely online with required specific meeting days and times where students are expected to be actively engaged in a virtual setting. All formalized instruction and coursework are completed online. Proctored or monitored exams may be required.

**Face-to-Face.** Face-to-face courses meet in a CMU approved location with required specific meeting days, times, and location as noted in the course registration system. Internet-based and other technology may be used to enhance instruction in and outside of class. Proctored or monitored exams may be required.

**Hybrid.** Hybrid courses have required specific meeting days and times outlined in the course registration system and require face-to-face class sessions in a CMU approved location while other required class sessions can be a mixture of synchronous online meetings and asynchronous online activity. Instructors will determine which class sessions will be held in which modality within the specified course day and time range and these will be announced in the course syllabus. Proctored or monitored exams may be required.

**HyFlex.** HyFlex courses meet on specific days and times simultaneously face-to-face and synchronously online. Course meeting dates, times, and location(s) are noted in the course registration system, and face-to-face meetings occur in a CMU approved location. Students can change their mode of attendance freely according to their need or preference. At the instructor's discretion, access to course content may be available online asynchronously. Proctored or monitored exams may be required.

## Other Designation

- **CR/NC Credit/No Credit**, see index for more information.
- **Italic Type** Indicates the course is approved for the University Program
- Courses are listed in alphabetical order by designator.

## AAD - Academic Advancement

Contact the Office of Student Success for more information.

### AAD 101 Academic Empowerment 2(2-0)

Provides the information, materials and practice necessary for empowering students to make wise academic and life choices. Prerequisites: Permission of instructor.

### AAD 102 College Learning Strategies 2(2-0)

Provides information, materials and practice to assist students in developing the active learning and study strategies needed for success in college.

### AAD 103 College Reading Strategies 3(3-0)

Provides instruction and practice to assist students in developing the active, flexible and critical reading strategies necessary to meet educational objectives across disciplines.

### AAD 104 College Strategies for Nontraditional Students 2(2-0)

Provides information and strategies to strengthen the academic and personal skills needed for successful completion of college. Primarily for nontraditional students. This course is approved for offering in a distance learning format.

### AAD 197 Special Topics in Learning Enhancement 1-3(Spec)

Selected topics of interest not otherwise available in a course regularly offered. Current topic(s) are listed in the semester Class Schedule. Repeatable up to 3 credits when content does not duplicate previous special topic studies. Prerequisites: See Course/Search and Registration, determined specific to the topic presented.

## ACC - Accounting

See the School of Accounting for more information.

### ACC 101 Introduction to Accounting 3(3-0)

Basic concepts and principles of accounting. Overview of accounting cycle from a building block approach. No credit if credit has been earned in ACC 201. Does not count on major or minor in College of Business Administration.

### ACC 197 Special Topics in Accounting 3(3-0)

Introductory topics in accounting. Credit counts toward total hours for graduation, but not toward a major or minor in the College of Business Administration.

### ACC 201 Concepts of Financial Accounting 3(3-0)

Students gain an understanding of the accounting system used to develop financial statements. The emphasis is on interpreting financial data used in business decision making. This course is approved for offering in a distance learning format. Recommended: completion of MTH 105.

### ACC 202 Concepts of Managerial Accounting 3(3-0)

Students gain an understanding of how the information provided by an accounting information system is used for managerial decision making. This course is approved for offering in a distance learning format. Prerequisite: minimum grade of C- in ACC 201.

### ACC 203 Essentials of Accounting for Business 3(3-0)

Basic concepts and principles of an accounting process used to develop financial reports and make management decisions for businesses and other entities. This course may be offered in an online format. Prerequisite: MTH 105.

### ACC 204 Accounting for Not-For-Profit Entities 1(1-0)

Students gain an understanding of accounting and financial reporting for not-for-profit entities. This course is approved for offering in a distance learning format. Prerequisite: ACC 203 with a minimum grade of C.

### ACC 250 Introduction to Financial Accounting 3(3-0)

Overview of how a business functions through the generation and interpretation of accounting data. This course may be offered in an online format. Prerequisite: MTH 107 or placement into MTH 130 or MTH 217.

### ACC 255 Managerial Accounting and Decision Making 3(3-0)

Managerial decision-making methods using accounting and financial information and includes application of concepts to integrated study of business problems. This course may be offered in an online format. Prerequisite: ACC 250 or ACC 201.

### ACC 301 Intermediate Accounting I 3(3-0)

Study of financial accounting processes, theory and principles. Includes analysis of financial statements and financial reporting issues. This course may be offered in an online format. Pre/Co-Requisites: ACC 202 or 255.

### ACC 302 Intermediate Accounting II 3(3-0)

Continuation of ACC 301. Course includes in-depth study of special reporting issues related to financial accounting. This course may be offered in an online format. Prerequisites: ACC 301; and admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

### ACC 311 Federal Income Taxation I 3(3-0)

Basic concepts of federal income taxation, emphasizing individual taxpayers. Tax law covering taxable and excludable income, deductions, tax credits, property transactions, depreciation, sources of tax law, and tax research. This course may be offered in an online format. Prerequisites: ACC 250 or ACC 201.

### ACC 321 Managerial Cost Accounting 3(3-0)

Accumulation and use of cost accounting information for planning and controlling. Process, job order, and standard cost systems. This course may be offered in an online format. Prerequisites: ACC 202 or 255; STA 282 or 382; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

### ACC 370 Accounting Systems and Controls 3(3-0)

Study of accounting systems and business processes; internal control frameworks and regulation; current accounting technology. This course may be offered in an online format. Prerequisites: Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor. Pre/Co-requisites: ACC 255 and 301.

### ACC 489 Accounting Internship/Co-Op 1-3(Spec)

Full time, on-the-job work experience for one or more semesters in industry, government, or public accounting arranged through departmental internship/co-op supervisor. CR/NC only. Prerequisites: 6-12 hours of accounting depending upon the program entered; overall GPA of 3.0; accounting GPA of 3.2; acceptance by program supervisor; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

### ACC 491 Independent Studies 1-3(Spec)

Directed reading or research on an approved topic. Not more than 3 credits for ACC 491 may count toward accounting major. Prerequisites: permission of instructor; 86 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

### ACC 501 Advanced Accounting 3(3-0)

Incorporate investments and consolidated statements, purchases, and goodwill, segment reporting, interim reporting, partnerships, foreign operations, and fund accounting. Prerequisites: ACC 301, ACC 302; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

### ACC 511 Federal Income Tax II 3(3-0)

Formation, operation, and distributions of corporations, partnerships, Subchapter S corporations and LLCs. Prerequisites: ACC 311; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor or Graduate status.

### ACC 512 Tax Research and Administration 3(3-0)

A study of the sources of tax law, professional tax research techniques, IRS procedures used to administer the tax system, and professional tax practice standards. Prerequisites: ACC 311; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

### ACC 517 Federal Estate and Gift Taxation 3(3-0)

Concentrated study of federal taxation of death transfers and gratuitous lifetime transfers including preparation of decedent's final income tax return. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

### ACC 521 Managerial Cost Control Analysis 3(3-0)

Principles and techniques of accounting data analysis and profit-planning, measurement, evaluation, and control for management. Prerequisites: ACC 321; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor or Graduate status.

### ACC 531 Auditing and Assurance Services 3(3-0)

A study of assurance services offered by professional services firms with major emphasis on the traditional auditing concepts and procedures. This course may be offered in an online format. Prerequisite: ACC 302. Pre/Co-requisite: ACC 370.

### ACC 536 Forensic Accounting 3(3-0)

The study of financial fraud and the methods of fraud detection, investigation, and prevention. This course may be offered in an online format. Prerequisites: ACC 255; MKT 304 or MKT 301.

### ACC 543 Fund Accounting 3(3-0)

Accounting principles and procedures for governmental units and various nonprofit organizations. Prerequisites: ACC 301; ACC 302; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor or Graduate status.

### ACC 551 Advanced Seminar for Public Accounting 3(Spec)

An advanced seminar course applying financial and assurance functions within a public accounting perspective. This course may be offered in an online format. Prerequisite: Departmental approval. Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

### ACC 570 Strategic Accounting System Development and Implementation 3(3-0)

The strategic design and implementation of accounting systems for competitive advantage. Topics include enterprise resource planning, business process re-engineering, change management and semantic object modeling. Prerequisites: ACC 301, ACC 302, ACC 321, ACC 370; 56 semester hours completed and Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor; or graduate students, permission of the MBA Director.



**ACC 575 Data Analytics for Accounting 3(3-0)**

Applied technology course focusing on converting data into accounting information using current analysis tools and techniques. This course may be offered in an online format. Prerequisites: ACC 302, 370; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor; or graduate standing.

**ACC 597 Special Topics in Accounting 1-3(Spec)**

Advanced topics in accounting. Not more than 3 credits for 597 count toward accounting major, minor, or concentration. Prerequisites: permission of instructor; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

For graduate level course descriptions above 600, consult the Graduate Studies Bulletin.

**ACC 605 Accounting Theory I 3(3-0)****ACC 689 Accounting Internship 3(Spec)****ACC 711 Tax Seminar 3(3-0)****ACC 721 Managerial Accounting Seminar 3(3-0)****ACC 730 Configuration, Control and Implementation of Global Accounting Systems using GRC 3(3-0)****ACC 731 Auditing Seminar 3(3-0)****ACC 741 Fund Accounting Seminar 3(3-0)****ACC 791 Independent Studies 1-3(Spec)****ACC 797 Special Topics in Accounting 1-3(Spec)****ACT - Actuarial Science**

See the Department of Statistics, Actuarial and Data Sciences for more information.

**ACT 539 Probability Foundations of Actuarial Science 3(3-0)**

Fundamental probability tools for quantitatively assessing risk, with emphasis on application of these tools to problems encountered in actuarial science. Prerequisite: STA 584.

**ACT 540 Mathematical Theory of Interest 3(3-0)**

Fundamental concepts of the mathematical theory of interest and applications in calculating present and accumulated values for various streams of cash flows. Prerequisite: MTH 133 or graduate standing.

**ACT 541 Actuarial Mathematics for Life Contingencies I 3(3-0)**

Introduction to survival distributions and life tables, life annuities and life insurance, benefit premiums and benefit reserves. Prerequisites: ACT 539, 540.

**ACT 542 Actuarial Mathematics for Life Contingencies II 3(3-0)**

Estimating survival curves, introduction to multiple state models including multiple life models and multiple decrement models, pension mathematics, and cash flow analysis for insurance products. Prerequisites: ACT 541; STA 585.

**ACT 543 Mathematics of Financial Models 3(3-0)**

Introduction to the theoretical basis of certain actuarial models and the application of those models to financial risks. Prerequisites: ACT 540; STA 584; or graduate standing.

**ACT 544 Statistics for Risk Modeling 4(4-0)**

Concepts, methodology and applications of statistical learning, generalized linear models, regression-based time series models, principal component analysis, decision tree models, and cluster analysis. Prerequisite: STA 589; STA 581 or 585; or graduate standing.

**ANT - Anthropology**

See the Department of Philosophy, Anthropology, and Religion for more information. **Note:** Prerequisites for any courses in anthropology may be waived by permission of the Department Chair and the instructor.

**ANT 110 Meet Your Ancestors and Other Distant Relatives 3(3-0)**

An introduction to human place in nature, including our relationship to non-human primates and the adaptations and behavior of Neanderthals and other early human groups. (University Program Group II-A: Descriptive Sciences)

**ANT 120 Ancient Insights into Current Crises 3(3-0)**

A survey of major archaeological discoveries around the world considered within the context of past and contemporary problems faced by human societies. (University Program Group III-B: Studies in Social Structures)

**ANT 170 Culture & Human Experience: Introduction to Cultural Anthropology 3(3-0)**

Comparative study of contemporary cultures and impact of globalization on cultural diversity, including methods and theories employed. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**ANT 171 Human Origins: Introduction to Biological Anthropology 3(3-0)**

How did humans evolve? This course explores human and primate evolution, primate behavior, and the origin of human hereditary variations. May be offered as Writing Intensive. (University Program Group II-A: Descriptive Sciences)

**ANT 173 Laboratory in Biological Anthropology 1(0-2)**

Practicum surveying the techniques and procedures by which evidence is developed and analyzed in studying human variation and evolution. Satisfies University Program Group II laboratory requirement. Pre/Co-requisite: ANT 171. (University Program Group II-A: Descriptive Sciences)

**ANT 174 Inequality in the Ancient World: Origins of Early States 3(3-0)**

Introduction to archaeological method and theory with a focus on the emergence of political institutions and social inequality in Africa, Asia and Europe. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**ANT 175 Archaeology of the Americas 3(3-0)**

Archaeology of the Americas from the earliest peopling of the Western Hemisphere to the rise of civilizations such as the Maya, Aztec, and Inca. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**ANT 200 Education and Culture 3(3-0)**

Processes of learning from infancy through adolescence across cultures and institutions, including family and school. Origins and spread of mass education. Educational disparities and inequality. (University Program Group III-B: Studies in Social Structures)

**ANT 202 Sex and Gender Across the Globe 3(3-0)**

Examination of gender and sexuality across cultures and through time through the lens of anthropology. (University Program Group III-A: Behavioral Sciences)

**ANT 240 Current Native American Issues 3(3-0)**

Current social, economic, political, and cultural issues affecting Native Americans; social movements of resistance and change. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**ANT 265WI Medicine, Health and Illness: Why Culture Matters 3(3-0)**

How culture shapes medicine, health and illness by defining patients, problems, treatments and the production and distribution of care. An introduction to medical anthropology. Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**ANT 276 Language, Identity, and Politics 3(3-0)**

Concepts and practice of linguistic anthropology, the study of how people use language in cultural contexts. May be offered as Writing Intensive. (University Program Group III-A: Behavioral Sciences)

**ANT 300 Study Abroad in Anthropology 3-6(Spec)**

Short-term faculty-led study abroad experience, focused on the history and culture of a non-western location. Prerequisites: 56 credit hours. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**ANT 318 A Toolkit for Advocacy and Activism 3(3-0)**

An introduction to the methods, perspectives, challenges and opportunities of advocacy and activism in contemporary society. Identical to SOC 318 and SWK 318. Credit may not be earned in more than one of these courses. Prerequisites: 30 credit hours or the completion of at least one writing intensive course; the completion of at least one UP Group IV course.

**ANT 320 Native North American Cultures 3(3-0)**

Diversity of North American Indian cultures, their experiences of colonization and culture change, and their contributions to American and global cultures. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**ANT 321 Cultures of Latin America 3(3-0)**

Indigenous, European, and African origins and contemporary diversity of cultures of Latin America. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**ANT 322 Cultures of Africa 3(3-0)**

Cultures of Africa, their history and contemporary diversity. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**ANT 324 Cultures of the South Pacific 3(3-0)**

Culture and social change in Melanesia, Micronesia, and Polynesia. Human settlement, ecology, indigenous cosmologies, evolution of socio-political institutions. Colonial legacy in the region. Contemporary issues. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**ANT 340 South American Archaeology 3(3-0)**

Archaeology of South America. Emphasis on the Central Andean region. Introduction to documentation and interpretation of cultural developments from earliest human occupations to European conquest. Prerequisite: ANT 175.

**ANT 341 Forensic Sciences 3(3-0)**

An introduction to forensic sciences, including physical, biological, and trace evidence and its recovery, estimation of time since death, trauma, court testimony, and ethical standards.

**ANT 342 Principles of Forensic Anthropology 3(3-0)**

An introduction to the forensic identification and analysis of human skeletal remains for utilization by criminal justice authorities, missing persons bureaus, archaeologists, and paleoanthropologists. Prerequisites: One of: ANT 171, ANT 173, ANT 341, BIO 101, BIO 105QR, BIO 110, BIO 111, BIO 151.

**ANT 344 Michigan Archaeology 3(3-0)**

Michigan archaeology from the first peopling of the area to historic times. Changing adaptive patterns examined in the context of the Great Lakes region and North America generally. Recommended: ANT 174 or 175.

**ANT 345 Archaeology & Heritage Management 3(3-0)**

Introduction to the laws and practice of Cultural Resource Management (CRM) and applied archaeology within public, private, and governmental settings. May be offered as Writing Intensive. Recommended: ANT 174 or ANT 175.

**ANT 347 Human Evolution 3(3-0)**

Fossil evidence of human evolution and its analysis within a theoretical framework of ongoing evolutionary forces and basic phylogenetic principles. Prerequisite: ANT 171.

**ANT 348 Stone-Age Europe: Peoples and Cultures of the Distant Past 3(3-0)**

Ancient peoples and cultures of Europe from the perspective of anthropological archaeology, beginning perhaps 800,000 years ago and developing through Paleolithic, Mesolithic, and Neolithic periods.

**ANT 350WI Water as Life, Death, and Power 3(3-0)**

*Problems of water access, water-borne pathogens, water treatment, and power relationships in global cultures from anthropology, biology, and chemistry perspectives. Identical to BIO 350WI and CHM 350WI. Credit may not be earned in more than one of these courses. May not be applied to any Biology major or the Biology minor. May not be applied to Chemistry or Biochemistry major or minor. Writing Intensive. Prerequisites: Completion of 56 hours. Recommended: ANT 171 or 170; BIO 101 or 110 or 111; CHM 111 or 120 or 131. (University Program Group III-B: Studies in Social Structures)*

**ANT 351 Human Variation, Race, and the Mistakes We Make 3(3-0)**

An examination of human biological and genetic variation, and analysis of the misconceptions we develop when viewing human biological variation through a racial lens. Recommended: ANT 110 or ANT 171 or BIO 101 or BIO 105QR or BIO 111 or BIO 151.

**ANT 353 Contested Boundaries: The US-Mexico Border 3(3-0)**

*An examination of the historical development and contemporary cultural, economic and political issues concerning the US-Mexico border and US Southwest. Identical to CGL 353. Credit may not be earned in more than one of these courses. (University Program Group III-B: Studies in Social Structures)*

**ANT 356 Primate Behavior 3(3-0)**

Applying principles of evolution to primate behavior with emphasis on effects of ecology on social relations and group organizations. Recommended: ANT 171 or BIO 101.

**ANT 358 Plagues and Peoples 3(3-0)**

Etiological and ecological approaches to human diseases; how diseases affect past and contemporary humans; explorations of interactions between human biology, biological/cultural adaptation, and disease. May be offered as Writing Intensive. Prerequisites: ANT 171 or ANT 250 or BIO 101 or BIO 105QR or BIO 110 or BIO 111 or BIO 151 or BIO 165 or BIO 250 or CHM 250.

**ANT 370 Global Environmental Issues 3(3-0)**

Social and cultural dimensions of global population issues, food and energy policies, destruction of indigenous lifeways, roles of multinational organizations, environmental racism, and environmental movements. Identical to SOC 370; credit may not be earned in more than one of these courses.

**ANT 371 Culture, Economies, and Social Change 3(3-0)**

Historical and current cultural and economic changes on both a global and local scale. How people both create and live within these changes. Identical to SOC 371. Credit may not be earned in more than one of these courses. Prerequisites: 56 credit hours.

**ANT 380 Culture, Art, and Community Engagement 3(3-0)**

*Applied uses of anthropology and the arts to address current social issues. (University Program Group III-A: Behavioral Sciences)*

**ANT 388 Special Topics in Anthropology 1-12(Spec)**

Faculty-taught, undergraduate topical course within anthropology not included in courses currently listed in the Bulletin. Prerequisite: At least 56 credit hours.

**ANT 426 Archaeological Theory 3(3-0)**

Nature of archaeological evidence, methods of analysis, theories and problems in interpretation and explanation of the human past. Offered in alternate years in rotation with ANT 451. Prerequisite: ANT 175.

**ANT 430 Applied Anthropology 3(3-0)**

The application of basic research and methods in the subfields of anthropology to address contemporary socio-cultural problems related to human diversity across ethnicity, "race," class and gender. Prerequisites: ANT 170, 171, and 175.

**ANT 450 Ethnographic Methods and Research Design 3(3-0)**

Ethnographic methods, ethics, and research design in cultural anthropology. Identical to SOC 450. Credit may not be earned in more than one of these courses. Prerequisite: ANT 170.

**ANT 451 History of Anthropological Thought 3(3-0)**

History of anthropological theory and ongoing ethical challenges. Key theorists, concepts, and schools of thought. Contemporary developments. Prerequisite: ANT 170.

**ANT 459 Anthropology of Religion 3(3-0)**

Anthropological approaches to religions in global and local contexts. May be offered as Writing Intensive. Recommended: ANT 170.

**ANT 461 Race, Racism and Human Evolution 3(3-0)**

This course examines the relationship between science and social policies that impact "race" historically and in the present day. Prerequisites: ANT 351, or a signed major or minor in Anthropology and junior or senior status.

**ANT 465 Capstone Experience in Anthropology 3(3-0)**

A current topic of broad anthropological interest, as approached from the various perspectives of the subdisciplines. May be offered as Writing Intensive. Prerequisites: Authorized major or minor in Anthropology, and Junior or Senior standing, and ANT 170, 171, either ANT 174 or 175.

**ANT 498 Independent Studies In Anthropology 1-12(Spec)**

Directed reading or research of an approved topic guided by a faculty member. Not open to students on academic probation. Prerequisites: 9 hours of Anthropology at the 200-level or higher; permission of instructor.

**ANT 500 Field School in Archaeology 3-6(Spec)**

Intensive archaeological practicum including field survey, excavation, and laboratory analysis of resulting materials. Repeatable up to 6 hours when content does not duplicate previous topics. Prerequisites: ANT 175; permission of instructor.

**ANT 540 Archaeological Field and Laboratory Techniques 3(3-0)**

Practical instruction in archaeological methods including field survey and excavation; description, classification, data analysis, and documentation of cultural materials in the laboratory. Identical to CRM 540. Credit may not be earned in more than one of these courses. Prerequisites: ANT 175 and one of the following: ANT 340, 344, 348; or Graduate standing.

**ANT 542 Methods in Forensic Anthropology: Osteology and Skeletal Analysis 4(3-2)**

Lectures and laboratory training in forensic identification and analysis of human skeletal remains for utilization by criminal justice authorities, missing persons bureaus, archaeologists and paleoanthropologists. Identical to CRM 542. Credit may not be earned in more than one of these courses. Prerequisites: ANT 173, 342, or 347; or graduate standing.

**ANT 588 Special Topics in Anthropology 1-10(Spec)**

Faculty-taught advanced topical course within anthropology not included in courses currently listed in the bulletin. Prerequisites: 15 credit hours of Anthropology; or graduate standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**ANT 698 Independent Studies in Anthropology 1-12(Spec)****ANT 700 Directed Student Research in Archaeology 1-6(Spec)****ANT 798 Thesis 1-6(Spec)****ARB - Arabic**

*See the Department of History, World Languages, and Cultures for more information.*

**ARB 101 Elementary Arabic I 4(4-0)**

*Basic Arabic language skills and culture. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**ARB 102 Elementary Arabic II 4(4-0)**

*Basic Arabic language skills and culture. Continuation of ARB 101. Recommended: ARB 101. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**ART - Art**

*See the Department of Art and Design for more information.*

**ART 096 Art Event Attendance 0(0-0)**

Attendance at lectures, exhibition openings or workshops as approved by the Department of Art and Design. Students are required to register for and complete ART 096 for four semesters once they have a signed BFA in Studio Art, Graphic Design, Animation, BA in Art History, BAA in Studio Art or BS in ED in Visual Art Education. CR/NC only. Prerequisite: Signed BFA in Studio Art, Graphic Design, Animation, BA in Art History, BAA in Studio Art or BS in Ed in Visual Arts Education.

**ART 103 Introduction to Studio Art 3(0-6)**

*Introductory hands-on art studio course for non-art majors. Students will explore various materials and think, talk and write about art. (University Program Group I-B: The Arts)*

**ART 106 Introduction to Drawing 3(0-6)**

Introduction to drawing media and techniques with a focus on drawing from observation and to formal principles of composition and conceptual inventiveness.

**ART 114 Understanding Digital Photography 3(3-0)**

Introduction to the basic compositional skills and conceptual applications of digital photography. This course cannot be applied to any Art Major or Minor.

**ART 117 Introduction to Contemporary Issues in Art 3(3-0)**

Introduction to the aesthetic theory and visual language of Modernism, Post-Modernism, and Post-Postmodernism.

**ART 119 Design Foundations 3(0-6)**

Introduction to elements and principles of design and their application, including creative problem solving and visual literacy, as it applies to two and three-dimensional form.

**ART 121 From Memes to Masterpieces 3(3-0)**

*From museums to phones, and billboards to drones: an introduction to visual culture and how images structure our lives and our understanding of the world. (University Program Group I-B: The Arts)*

**ART 125 Digital Design 3(0-6)**

Introduction to elements and principles of design, creative problem solving and visual literacy as it applies to digital media.

**ART 126 Introduction to the Visual Arts 3(3-0)**

To develop an aesthetic awareness, appreciation, and understanding of the visual arts through an introduction to media, formal analysis, and interpretation. This course cannot be applied to any Art Major or Minor. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

**ART 141 The Self and Other in Photography 3(3-0)**

Examines how photography affirms identity, power, and social status. Covers representation of marginalized groups, such as indigenous people, women, and members of the LGBTQ community. Identical to WGS 141. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)

**ART 202 Introduction to Digital Fabrication 3(0-6)**

A basic introduction to digital fabrication, including Laser Cutting, CNC Plasma Cutting, 3D Printing, & CNC Routing used in the creative process.

**ART 207 Introduction to Animation: Traditional Media 3(0-6)**

Basic film animation with no previous animation experience required. This course covers basic traditional animation techniques in a variety of 2-D and 3-D materials.

**ART 214 Introduction to Ceramics 3(2-3)**

An introduction to hand-building and wheel-throwing processes with an emphasis on technical, formal, historical, and conceptual development.

**ART 217 Introduction to Figure Drawing 3(0-6)**

Introduction to the study of the human figure in drawing with emphasis on three-dimensional representation, proportions, and anatomical structure. Prerequisite: ART 106.

**ART 220 Animation Drawing I 3(0-6)**

Students will learn concepts essential to drawn animation with an emphasis placed on solid drawing, arcs, staging and secondary action. Pre/Co-requisites: ART 106, ART 207.

**ART 222 2D Digital Animation 3-6(Spec)**

2D digital animation techniques from simple graphics and FX to visual storytelling. Tools needed for basic motion design and compositing will be covered. Prerequisite: One of: ART 125, ART 220, ART 231, BCA 223.

**ART 224 3D Computer Animation I: Foundations 3(0-6)**

This course provides students with the basic tools to explore 3D animation production. Students will develop effective workflows for 3D modeling, texturing, and animation. Pre/Co-requisite: One of the following: ART 125, BCA 223, CPS 240, CPS 282.

**ART 231 Introduction to Graphic Design 3(0-6)**

An introduction to the theory and practice of communication design. An emphasis is placed on technical and aesthetic fundamentals.

**ART 233 Introduction to Painting 3(0-6)**

An introduction to painting media and techniques with a focus on painting from observation in order to express light, space, form through the use of color.

**ART 235 Logo and Identity Design 3(0-6)**

A continuation of ART 231, with emphasis on development of conceptualization and visualization skills. The course focuses on printed materials that apply to identity systems. Prerequisites: ART 231.

**ART 241 Introduction to Photography 3(0-6)**

Introduction to the basic technical and conceptual skills of digital photography as a fine art.

**ART 251 Introduction to Printmaking 3(0-6)**

An introduction to fine art printmaking. This course explores a variety of print techniques including relief, intaglio, lithography and/or silkscreen.

**ART 258 Everyday Web Design 3(0-6)**

Web design as it relates to personal development and options for an on-line presence. This course does not count toward the Graphic Design Concentration.

**ART 261 Introduction to Sculpture 3(0-6)**

An introduction to the basic tools, techniques, processes, materials, history and concepts of traditional and contemporary sculpture.

**ART 277 History of Animation 3(3-0)**

The history of animation from the advent of early frame-by-frame experimentation to the present emphasizing key artistic and technological developments. Prerequisite: Completion of 26 credit hours.

**ART 283 Introduction to Western Art, Part I 3(3-0)**

History of Western art from prehistoric through medieval periods. Roots of western cultures seen in differing artistic styles and attitudes. (University Program Group I-A: Human Events and Ideas)

**ART 285 Introduction to Western Art, Part II 3(3-0)**

History of Western art from the Renaissance to the twentieth century. Relations of form and content to cultural attitudes. Unique contributions of major artists. (University Program Group I-A: Human Events and Ideas)

**ART 287 Introduction to Non-Western Art 3(3-0)**

An introduction to the visual arts of non-European cultures: Africa, Oceania, Asia and the Americas. Explores relations between arts, philosophies, and ways of life.

**ART 297 Special Studies 1-18(Spec)**

A general introduction to special topics, techniques, materials in studio areas.

**ART 301 Visiting Artist Studio Experience 3-9(Spec)**

A studio course taught by the visiting Artist-In-Residence. Repeatable up to nine hours when course content previously studied is not duplicated. Prerequisite: ART 106 or ART 119.

**ART 308 Storyboarding for Digital Media 3-6(Spec)**

A creative exploration into visual storytelling for short film. Students will explore camera, staging and pacing to develop stories with potential for producing original content. This course is repeatable when content is not duplicated. Prerequisite: BCA 223; or ART 125, 207.

**ART 309 Concept Development: Characters and Environments 3-6(Spec)**

Students will learn research and design strategies for developing the overall design style for visual story projects such as animated films, graphic novels, and video games. Prerequisite: One of ART 217 or ART 233 or ART 308.

**ART 312 Special Studies in Art History 3-9(3-0)**

Study of an art historical topic outside of the scope of regular departmental offerings, as selected by instructor. This course is repeatable when content is not duplicated. Prerequisite: Completion of 26 credit hours.

**ART 313 Ceramics: Hand-building 3(0-6)**

A continuation of the hand-building skills acquired in ART 214 covering vessel and sculpture making with an emphasis on technical, formal, and conceptual development. Prerequisite: ART 214.

**ART 314 Ceramics Studio: Wheel-throwing 3(0-6)**

A continuation of the wheel-throwing skills acquired in ART 214 focusing on vessel making with an emphasis on technical, formal, and conceptual development. Prerequisite: ART 214.

**ART 317 Digital Art History and Archaeology 3(2-3)**

Contemporary digital techniques and processes used in art history and archaeology. Prerequisite: Completion of 26 credit hours.

**ART 319 The Methods of Art History 3(3-0)**

Learn how to think like an art historian. Explore the ways art historians interpret art. Develop research skills on art historical topics. May be offered as Writing Intensive. Prerequisite: Completion of 36 credit hours, including 6 credit hours in art history.

**ART 320 Animation Drawing II 3-6(Spec)**

This class builds on the principles of drawn animation while implementing digital production tools and concepts designed to streamline the 2D drawn or traditional pipeline. Prerequisite: ART 220.

**ART 323 Digital Sculpture 3-6(Spec)**

This course will focus on advanced digital mesh-based organic 3D modeling techniques applied to industry standard sculpting workflows. This course is repeatable when content is not duplicated. Prerequisite: One of: ART 214, ART 224, ART 360.

**ART 324 3D Computer Animation II: Characters 3-6(Spec)**

In this course students design, build and animate 3D characters. Students learn advanced modeling as well as intermediate lighting, rigging and animation techniques. Prerequisite: ART 224. Pre/Co-requisite: ART 207.

**ART 325 3D Computer Animation III: Environments 3-6(Spec)**

In this course, students learn advanced environment 3D modeling techniques, advanced lighting, color and light theory, and industry standard rendering workflows. Prerequisite: ART 324.

**ART 327 Alternative Strategies in Animation 3-6(Spec)**

This class is designed for students who wish to pursue alternative animation techniques such as clay on glass, charcoal, sand, paint on glass, and pixilation. Prerequisite: One of: ART 217, ART 220, ART 233, ART 251, ART 261, ART 349, ART 406.

**ART 328 Stop Motion Animation 3-6(Spec)**

Through weekly stop motion assignments, students will develop a sense of timing and character while learning camera set-up, lighting and fabrication. Prerequisite: ART 207 or ART 261.

**ART 334 Watercolor Painting 3(0-6)**

Exploration of transparent watercolor techniques including dry-brush and mixed-media, and development of an understanding of paper surfaces and pigment compositions. Prerequisites: ART 106.

**ART 335 Design Bureau 3(0-6)**

Investigations into the conception and production of communication graphic solutions for real-world clients in a group or "bureau" pre-professional studio setting. Prerequisite: signed BFA with a concentration in Graphic Design.

**ART 336 Illustration 3(0-6)**

Basic methods of black and white and color digital illustration with a specific focus for the graphic designer. Prerequisites: ART 106, 115.

**ART 341 History of Photography 3(3-0)**

The history of photography from the advent of the camera obscura to the present, emphasizing the contributions of major photographers.

**ART 342 Alternative Photographic Processes 3-6(Spec)**

Creative work using experimental lens-based image capture and alternative printing methods. Prerequisite: 26 completed credit hours. Recommended: ART 241 or JRN 220.

**ART 343 Art in the Elementary School Grades K-4 3(3-0)**

An art methods class for the art education major covering developmentally appropriate curricula and content for the elementary school student. Prerequisites: ART 106, ART 115, ART 118, and Admission to Teacher Education.



**ART 344 Art in the Middle School Grades 5-8 3(3-0)**

An art methods class for the art education major covering developmentally appropriate curricula and content for the middle school student. Prerequisites: ART 106, ART 115, ART 118, ART 343, and admission to the Teacher Education program.

**ART 345 Art in the Elementary School 2(1-2)**

This course investigates the essential role of art in elementary schools. Requisite knowledge, skills, and pedagogies are acquired through readings, lecture, studio, and clinical practice. Prerequisite: EDU 107.

**ART 346 Secondary School Art and Mid-Tier Observation 3(2-2)**

Similar to ART 345, but applicable to the secondary grades. Students enrolled are required to put in a maximum of 2 hours per week in Mid-tier observation. Prerequisite: Admission to Teacher Education.

**ART 349 Typography 3(0-6)**

An intensive survey of the history and application of letterform. Prerequisite: ART 231.

**ART 351 Screen Printing 3(0-6)**

Printmaking studio course focusing on the various methods and technique relating to the silkscreen process. Conceptual, formal and technical development will be emphasized. Recommended: Art 106.

**ART 358 Web Design I 3(0-6)**

Web design as it relates to graphic design. Prerequisites: ART 349; signed BFA with a concentration in graphic design.

**ART 360 Figure and Portrait Sculpture 3-6(Spec)**

Modeling the human form by working simultaneously from live models and anatomical models. Students will learn basic anatomy, proportions, aesthetics, and armature building. Prerequisite: ART 106.

**ART 361 Character Sculpture 3-6(Spec)**

Students will model characters by working simultaneously from source material and anatomical models. Students will learn basic anatomy, proportions, aesthetics, and armature building. Prerequisite: ART 106.

**ART 363 History of Design: 1750-2010 3(3-0)**

*Survey of the development of the applied arts in material culture from the beginning of the Industrial Revolution into the twenty-first century. Recommended: Sophomore standing or above. (University Program Group I-A: Human Events and Ideas)*

**ART 366 Contemporary Design Issues 3(3-0)**

A survey of the ethical, conceptual, and stylistic trends driving contemporary design theory and practice. Prerequisites: Students will have completed a minimum of 26 credit hours.

**ART 377 Animation Mid-Tier Review 0(0-0)**

Required for Animation BFA students before entering 400 level Animation classes. Students will meet with faculty to develop a plan for final semesters. CR/NC only. Prerequisites: ART 207; One of: ART 220 or 224; signed BFA with concentration in Animation.

**ART 380 Greek Art and Architecture 3(3-0)**

The art and architecture of ancient Greece from the Bronze Age to Hellenistic periods. May be offered as Writing Intensive. Prerequisite: ART 283.

**ART 381 Early Christian and Byzantine Art 3(3-0)**

Art of the early Christian church and the Later Roman/Byzantine Empire from the reign of Theodosius I to the fall of Constantinople in fifteenth century. May be offered as Writing Intensive. Prerequisite: ART 283.

**ART 382 Gender and Art 3(3-0)**

Examines how gender identity and sexuality have affected art. Examines artists, patrons, viewers, and subjects of representations as gendered and historically specific entities. Identical to WGS 382. Credit cannot be earned in more than one of these courses. Prerequisite: Completion of 56 credit hours.

**ART 383 Modern Architecture 3(3-0)**

The history of building styles, technologies, and architectural theory in Europe and the United States from the late 19th century to the present. May be offered as Writing Intensive. Prerequisite: ART 285.

**ART 385 European Modernism 3(3-0)**

A history of the development of modern art in Europe, from the end of Impressionism to the outbreak of World War II. Prerequisite: ART 285.

**ART 386 American Art 3(3-0)**

History of American art from the colonial period to World War II. Prerequisite: ART 285.

**ART 387 Baroque Art 3(3-0)**

An examination of seventeenth-century European art in the context of social, political and religious developments. Prerequisite: ART 285.

**ART 388 Eighteenth-Century Art 3(3-0)**

An examination of eighteenth-century painting, prints, sculpture, architecture, and decorative arts of Europe in the context of social, political and intellectual developments. Prerequisite: ART 285.

**ART 389 Art of the Ancient Near East and Egypt 3(3-0)**

The art and architecture of Mesopotamia, Egypt, and the Levant from the origins of civilization through the Persian Empire. Prerequisite: ART 283.

**ART 391 African Art 3(3-0)**

Study of the art of sub-Saharan Africa, with an emphasis on art's role in the daily lives, social customs, and religions of particular African societies. Prerequisite: Completion of 26 credit hours.

**ART 397 Special Studies 1-18(Spec)**

In-depth consideration of specialized topics, techniques, and material in studio areas. Prerequisite: One of: ART 106, ART 117, ART 119, ART 125, ART 297.

**ART 399 BAA Animation Capstone 3(3-0)**

Students will create a portfolio, reel, and professional website. The course will also cover job search, freelance skills and engaging the media arts community. Prerequisite: Signed BAA in Animation; 56 credit hours; and one of the following: ART 320, ART 325, ART 327 or ART 328.

**ART 406 Drawing Studio 3-9(Spec)**

An upper level course in drawing with emphasis on spatial relationships, experimentation with media, and conceptual processes of drawing as avenues toward personal expression. Prerequisite: ART 106.

**ART 407 Character Performance for Animators 3-9(Spec)**

This class will focus on advanced animated character performance. Working in their preferred animated medium, students will develop short performances in response to regular prompts. Prerequisite: Signed BFA with a concentration in animation.

**ART 408 Independent Animation Studio 3-9(Spec)**

This course offers advanced exploration in 3D graphics, stop motion, drawn animation, or motion graphics. Prerequisite: Signed BFA with a concentration in animation.

**ART 409 Advanced Production Studio 3-9(Spec)**

This course simulates a professional animation studio where a variety of production artists and animators contribute to a single production spanning multiple semesters. Prerequisite: Signed BFA with a concentration in animation.

**ART 414 Ceramics Studio 3-9(Spec)**

Students utilize various ceramics processes with an emphasis on building new skill sets and beginning to develop a unified body of work. Prerequisite: ART 214.

**ART 417 Figure Drawing Studio 3-9(Spec)**

The study of proportion, anatomy, and definition of form as an avenue to the expressive possibilities of drawing the human figure. Prerequisite: ART 217.

**ART 420 Animation Studio I: Micro-Short Production 3(0-6)**

This class simulates a small studio-like environment. Students will work in their preferred media to design, implement, and deliver portfolio-ready, micro-short animations. Prerequisite: Signed BFA with a concentration in animation.

**ART 422 Animation Studio II: Short Form Production 3(0-6)**

Students will work in a studio-like environment to design, implement, and deliver competition-ready short productions with an emphasis placed on the quality and professional practices. Prerequisite: ART 420.

**ART 433 Painting Studio 3-9(Spec)**

An upper level course in painting with emphasis on color relationships, paint development, experimentation, and conceptual development, while developing personal expression. Prerequisite: ART 233.

**ART 435 Professional Design Practices 3(0-6)**

Development of print production and portfolio skills in preparation for employment in the communication design field. Prerequisites: Signed BFA with a concentration in Graphic Design. Pre/Co-requisites: ART 335.

**ART 436 Graphic Design Internship 3(Spec)**

Supervised internship of 180 hours in a graphic design firm or related field designed to complement classroom learning. Prerequisites: ART 235, 349; signed BFA with a concentration in Graphic Design; minimum of 56 credit hours completed and permission of instructor.

**ART 438 Motion Graphics 3(0-6)**

Introduction to computer-aided animation theory and application. Prerequisites: ART 235, 349; signed BFA with a concentration in graphic design.

**ART 441 Photography Lighting Studio 3(0-6)**

An upper level studio course in fine art photography with emphasis on technical refinement, conceptual development and professional presentation. Prerequisite: ART 241.

**ART 446 Visual Arts and Aesthetic Education 3(3-0)**

Exploration of the developmental methods and growth of aesthetic education in culture as it relates to secondary school curricula. Prerequisite: Admission to teacher education.

**ART 449 Advanced Typography 3(0-6)**

Advanced study in the theory and development of letterform. Prerequisites: ART 349, signed BFA with a concentration in graphic design.

**ART 451 Printmaking Studio 3-9(Spec)**

An upper-level studio course in fine art printmaking with emphasis on technical refinement, conceptual development and professional presentation. Prerequisite: ART 251 or 351.

**ART 458 Web Design II 3(0-6)**

Advanced web design as it relates to graphic design. Prerequisites: ART 358, signed BFA with a concentration in graphic design.

**ART 463 Sculpture Studio 3-9(Spec)**

A continuation and expansion of skills developed in Introduction to Sculpture with an emphasis on developing a personal working direction and a unified body of work. Prerequisite: ART 261.



**ART 471 BFA Studio Art Exhibition 3(3-0)**

Capstone experience for B.F.A. Studio Art students, including a thesis exhibition, an artist's statement, talk and final portfolio, and strategies for a successful post-graduate career. Must be taken in the last semester prior to graduation. Prerequisites: Signed BFA in Studio Art and senior standing.

**ART 472 Graphic Design Capstone Experience 3(0-6)**

A graphic design capstone experience focusing on the development of a personal design philosophy, a senior project and exhibition, a public presentation of work and a portfolio critique by an external assessor. Must be taken in one of the last two semesters prior to graduation. Prerequisites: ART 435; signed BFA with concentration in graphic design; and senior standing.

**ART 477 Animation Portfolio and Professional Practices 3(0-6)**

Students will focus on a portfolio, reel, and professional website. It will also cover job search, freelance skills and engaging the media arts community. Prerequisite: ART 422.

**ART 480 Roman Art and Architecture 3(3-0)**

The art and architecture of Rome and the Roman world from earliest times to Constantine the Great. Prerequisite: ART 283.

**ART 481 Western Medieval Art 3(3-0)**

The art and architecture of western Europe from late antiquity to 1400 CE. Prerequisite: ART 283.

**ART 482 Italian Renaissance Art 3(3-0)**

An examination of the art and architecture of fifteenth- and sixteenth-century Italy in the context of social, political, and religious developments. Prerequisite: ART 285.

**ART 483 Nineteenth Century European Art 3(3-0)**

A history and analysis of nineteenth century European art. Neoclassicism, Romanticism, Realism, Impressionism, Post-Impressionism, the Pre-Raphaelites, and the Symbolists. Prerequisite: ART 285.

**ART 485 Art After 1945 3(3-0)**

A history and analysis of works of art from 1945 to the present. May be offered as Writing Intensive. Prerequisite: ART 285.

**ART 486 Independent Study in Art History 1-6(Spec)**

Independent study of a topic in art history selected by student in consultation with instructor. Prerequisite: permission of instructor.

**ART 488 Northern Renaissance Art 3(3-0)**

An examination of fifteenth- and sixteenth-century art in Northern Europe in the context of social, political and religious developments. Prerequisite: ART 285.

**ART 489 Islamic Art 3(3-0)**

*Art and architecture of the Islamic world from the rise of Islam through the 17th century. Prerequisite: Completion of 26 credit hours. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**ART 492 Art History Professional Development 1(1-0)**

This course prepares Art History majors for the capstone class and professional opportunities after graduation. Prerequisites: ART 319; senior standing, a signed major in Art History. Pre/co-requisite: One of: ART 580, 581, 582, 586.

**ART 493 Art History Internship 1-6(Spec)**

Supervised work experience applying classroom concepts and skills to the operation and functioning of a museum, gallery, historic site or other art-related organization. Prerequisites: Completion of 26 credit hours; permission of instructor; signed Art History Major or Minor.

**ART 494 Gallery Management 3(2-2)**

Concepts and processes in the production of art exhibitions and gallery management. Students will select a theme, research and select art, develop interpretation and market an art exhibition. Prerequisites: MST 310, 320; ART 285; senior standing.

**ART 495 Art History Study Abroad 1-9(Spec)**

Experiential learning-based course incorporating study in a foreign country. Students learn methods for analyzing and interpreting art of other cultures alongside appropriate tools and techniques. Prerequisites: 26 credit hours; Permission of Study Abroad Director; Permission of Instructor.

**ART 497 Special Studies 1-18(Spec)**

Advanced study of specialized topics, techniques, and material in studio areas. Prerequisites: One of: ART 106, 117, 119, 125, 297; One of: ART 202, 207, 214, 217, 233, 241, 251, 261, 397.

**ART 499 BAA Studio Art Senior Seminar 3(3-0)**

Capstone course for B.A.A. Studio Art students, including development and presentation of senior portfolio, documentation of artwork, and professional strategies for establishing a successful career. Must be taken in one of the last two semesters prior to graduation. Prerequisites: Signed BAA in Studio Art and senior standing.

**ART 506 Advanced Drawing Studio 1-12(Spec)**

An individualized studio experience for the advanced student in drawing media. Development of an independently directed body of work and portfolio. Prerequisite: 6 credits of ART 406; or graduate standing.

**ART 514 Advanced Ceramics Studio 1-12(Spec)**

Individualized studio work in ceramics as it relates to the creation of a cohesive and personal body of artwork. Prerequisite: 9 credit hours of ART 414; or graduate standing.

**ART 517 Advanced Figure Drawing Studio 1-12(Spec)**

An individualized studio experience for the advanced student in figure drawing. Development of an independently directed body of work and portfolio. Prerequisite: 6 credits of ART 417; or graduate standing.

**ART 520 Animation Sr. Project I: Development and Pre-production 3-6(Spec)**

The first part of a two-semester experience in which animation students are required to complete a comprehensive project to showcase artistry, skills, and professional competence. This course is repeatable when content is not duplicated. Prerequisite: ART 422; signed BFA with concentration in Animation; and senior standing.

**ART 522 Animation Sr. Project II: Production and Post 3-6(Spec)**

The second part of a two-semester experience in which animation students are required to complete a comprehensive project to showcase artistry, skills, and professional competence. Prerequisite: ART 520.

**ART 533 Advanced Painting Studio 1-12(Spec)**

An individualized studio experience for the advanced student in painting media. Development of an independently directed body of work and portfolio. Prerequisite: 6 credits of ART 433; or graduate standing.

**ART 535 Emerging Media in Graphic Design 3(0-6)**

Developments in visual communication and their application through each step of creating a complete design cycle focused on the principles of usability design. Prerequisites: ART 358, ART 438; signed BFA with a concentration in graphic design.

**ART 541 Advanced Photography Studio 1-12(Spec)**

An individualized studio experience for the advanced photography student, emphasizing long-term independent projects, critiques, and the creation of a professional portfolio. Prerequisite: ART 441; or graduate standing. Recommended course: ART 342.

**ART 551 Advanced Printmaking Studio 1-12(Spec)**

An individualized studio experience in printmaking beyond ART 451 competency. Development of a fine art print portfolio. Prerequisite: 6 credits of ART 451; or graduate standing.

**ART 556 Independent Studio 1-12(Spec)**

An individualized studio experience determined in consultation with a faculty member. This course is intended for students who have completed the sequence of courses in an area of study. Prerequisites: Minimum 56 credit hours; or graduate standing.

**ART 561 Advanced Sculpture Studio 1-12(Spec)**

An individualized studio experience focusing on personal research of new techniques, processes, materials, history and concepts of traditional and contemporary sculpture. Prerequisites: 6 credits of ART 463; or graduate standing.

**ART 580 Seminar in Ancient/Medieval Art History 3-6(3-0)**

Advanced study of a topic in ancient or medieval art history selected by instructor using readings, discussion, lecture, and research as appropriate. This course is repeatable when content is not duplicated. May be offered as Writing Intensive. May be taken for graduate credit. Prerequisites: ART 283, ART 319, and additional 6 hours of 300+ level art history courses; or graduate standing.

**ART 581 Seminar in Early Modern Art History 3-6(3-0)**

Advanced study of a topic in early modern art history selected by instructor using readings, discussion, lecture, and research as appropriate. This course is repeatable when content is not duplicated. May be taken for graduate credit. May be offered as Writing Intensive. Prerequisites: ART 285, ART 319, and additional 6 hours of 300+ level art history courses; or graduate standing.

**ART 582 Seminar in Modern and Contemporary Art History 3-6(3-0)**

Advanced study of a topic in modern and contemporary art history selected by instructor using readings, discussion, lecture, and research as appropriate. This course is repeatable when content is not duplicated. May be offered as Writing Intensive. Prerequisites: ART 285, ART 319, and additional 6 hours of 300+ level art history courses; or graduate standing.

**ART 584 Drawing in Florence 3(Spec)**

An advanced drawing course in Florence, Italy, using the city as a source of inspiration for creative work. Prerequisite: ART 106; or graduate standing.

**ART 586 Special Topics Seminar in Art History 3-9(3-0)**

Advanced study of a thematic or cross-temporal art historical topic selected by instructor using readings, discussion, lecture, and research as appropriate. This course is repeatable when content is not duplicated. May be offered as Writing Intensive. Prerequisites: ART 319; additional 6 hours of 300+ level art history courses; or graduate standing.

**ART 589 Research Seminar in Art History 3(3-0)**

Seminar supporting research projects in art history, primarily intended for seniors who are art history majors. May be taken for graduate credit. Prerequisite: ART 492; or graduate standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**ART 685 Graduate Introduction to Art Historical Methods 3(3-0)****ART 686 Art History Graduate Research Seminar 3-9(Spec)**

## ASL - American Sign Language

See the Department of Communication Sciences & Disorders for more information.

**ASL 100 Introduction to the Deaf Community and Deaf Culture 3(3-0)**  
An introduction to the audiological, social, linguistic, and cultural aspects of Deafness and the Deaf community. (University Program Group IV-A: Studies in Discrimination)

**ASL 101 American Sign Language, Level I 3(3-0)**  
Basic receptive and expressive American Sign Language (ASL) vocabulary and grammatical structure; fingerspelling; and conversational behavior. Basic understanding of Deaf Culture and ASL linguistics.

**ASL 102 American Sign Language, Level II 3(3-0)**  
Basic receptive and expressive ASL vocabulary, grammar, fingerspelling, and conversational behavior. Basic understanding of Deaf Culture and ASL linguistics. A continuation of ASL 101. Prerequisite: ASL 101.

**ASL 201 American Sign Language, Level III 3(3-0)**  
Intermediate conversational American Sign Language. Beginning development of intermediate-level receptive and expressive skills. Continued consideration of Deaf Culture and ASL linguistics. Prerequisite: ASL 102.

**ASL 202 American Sign Language, Level IV 3(3-0)**  
Further development of intermediate-level receptive and expressive ASL vocabulary, grammar, fingerspelling, and conversational behavior; Deaf Culture and ASL linguistics. Continuation of ASL 201. Prerequisite: ASL 201.

**ASL 300 Introduction to the DeafBlind Community 3(3-0)**  
An introduction to the diversity of the DeafBlind community, including etiologies, accommodations for vision and hearing losses, communication strategies, supports, and social issues. Prerequisites: ASL 100, 202.

**ASL 305 Professions Serving Persons who are Deaf or Hard-of-Hearing 3(3-0)**  
Explores the roles of professionals who serve individuals who are Deaf or Hard-of-Hearing in educational, emergency-service, healthcare, government, and human-service organizations. Prerequisites: ASL 100, ASL 101.

**ASL 306 Language, Modality and Technology Choices in Deafness 3(3-0)**  
Explores the language, modality, and technology/service options available to persons who are Deaf or Hard-of-Hearing. Prerequisites: ASL 100, ASL 101.

**ASL 390 Sociocultural History of the American Deaf Community 3(3-0)**  
Social and cultural aspects of persons who self-identify as members of the American Deaf community, including history, patterns of social interaction, folklore, and art. Prerequisites: ASL 100, 202.

**ASL 391 American Deaf Culture via Study Abroad in France 3(3-0)**  
Cultural aspects of persons who identify as members of the American Deaf community, including history, social interaction, folklore, and art, via study abroad in France. Credit may not be earned in more than one of these courses: ASL 390, ASL 391. Prerequisites: ASL 100, 202. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**ASL 401 American Sign Language Level V 3(3-0)**  
Advanced conversational American Sign Language. Beginning development of advanced-level receptive and expressive skills. Continued consideration of Deaf Culture and ASL linguistics. Prerequisites: ASL 100, ASL 202.

**ASL 402 American Sign Language Level VI 3(3-0)**  
Advanced conversational American Sign Language. Continued development of advanced-level receptive and expressive skills. Continued consideration of Deaf Culture and ASL linguistics. Prerequisites: ASL 100, ASL 401.

**ASL 404 Advanced Fingerspelling and Numbers 3(3-0)**  
Reading/comprehending and producing fingerspelled words and numbers; emphasis on clarity, accuracy, incorporation into conversational ASL. Prerequisites: ASL 100, ASL 202.

**ASL 510 ASL Linguistics 3(3-0)**  
This course will examine the linguistics of American Sign Language. Topics will include the form, content and use of ASL; the relationship between ASL, spoken languages, and other signed languages; ASL acquisition; and historical change in ASL. Prerequisites: ASL 100, ASL 202.

**ASL 590 Independent Study 1-4(Spec)**  
Student-initiated study of a topic related to the ASL minor guided by a faculty member or faculty committee. Prerequisites: ASL 100, ASL 202, permission of instructor.

**ASL 593 Jamaica Study Abroad 3(Spec)**  
An international cultural and language immersion experience. Students apply their ASL skills while learning about Jamaican mainstream and Deaf culture by providing ASL instructional support in a Jamaican residential school for Deaf and Hard of Hearing children. Prerequisites: ASL 202; ASL 100 or 390; or graduate status; permission of instructor. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition, Option 2)

**ASL 594 ASL in Elementary Education 3(Spec)**  
Students apply their ASL skills and knowledge of Deaf culture by providing ASL instruction in a community educational enrichment program for elementary school children. Prerequisite: ASL 202, ASL 100 or ASL 390; and permission of instructor.

## ASL 595 Community Placements with Deaf Children and Adults 3(1-3)

Students apply their American Sign Language skills and knowledge of Deaf culture by working in community placements with Deaf children and/or adults. Prerequisites: ASL 202; ASL 100 or 390; and permission of instructor.

**ASL 597 American Sign Language Teaching Assistantship 3(Spec)**  
Students apply their American Sign Language skills and knowledge of Deaf culture by assisting in the provision of ASL instruction in a university ASL course. Prerequisites: ASL 202; ASL 100 or 390; and permission of instructor. Recommendations: Letter of support from university ASL course instructor.

**ASL 599 Special Topics 1-6(Spec)**  
Study of a selected topic, specific application, or current issue related to but not covered by the ASL Minor curriculum. Prerequisites: ASL 100, ASL 202, permission of instructor.

## AST - Astronomy

See the Department of Physics for more information.

**AST 111 Astronomy 3(3-0)**  
An overview of modern astronomy which illustrates the basic physical principles and methodologies underlying all the sciences. Topics include the solar system, stars and stellar systems, galaxies and cosmology. (University Program Group II-A: Descriptive Sciences)

**AST 112 Introduction to Astronomical Observations 1(0-2)**  
The observation and interpretation of the sky using the naked eye, small telescopes, celestial globes, and star maps. Supplements AST 111 by providing observational experience. Satisfies University Program Group II laboratory requirement. This course may be offered in an online or hybrid format. Pre/Co-Requisite: AST 111. (University Program Group II-A: Descriptive Sciences)

**AST 165 Foundations of Astronomy 1(0-2)**  
Inquiry-based survey of astronomy including the observation and interpretation of the sky using the naked eye. Topics include solar system, stars, and galaxies.

**AST 260 General Astronomy I 4(3-2)**  
A mathematical treatment of modern astronomy for majors/minors in the sciences. Coordinate systems, astronomical instruments, time, moon and eclipses, earth as a planet, other solar system objects. Prerequisite: PHY 145.

**AST 261 General Astronomy II 4(3-2)**  
A continuation of AST 260. Stellar astronomy, interstellar matter, galactic structure, galaxies, quasars, cosmology. Prerequisite: AST 260.

**AST 562 Observational Astronomy 4(3-3)**  
Astronomical coordinate systems, astronomical instruments, and the techniques of astronomical direct imaging, photometry, and spectroscopy. Prerequisites: AST 261 or graduate standing. Pre/Co-requisite: PHY 322 or graduate standing.

**AST 563 Astrophysics 3(3-0)**  
Stellar atmospheres, stellar interiors, interstellar matter and topics of current interest. Prerequisite: AST 261; or graduate standing in Physics. Pre-or co-requisite: PHY 332; or graduate standing in Physics.

**AST 580 Special Topics in Astronomy 1-9(Spec)**  
Topics in astronomy or astrophysics not ordinarily covered in regular courses. Prerequisites: As specified in course syllabus.

**AST 590 Independent Study 1-6(Spec)**  
Individual study in an area not covered in regular courses. Prior permission of the instructor must be obtained. Prerequisites: AST 260 and permission of instructor.

## ATR - Athletic Training

See the School of Rehabilitation and Medical Sciences for more information.

**ATR 150 Introduction to Athletic Training 3(3-0)**  
Introduction to the professions of athletic training. Exploration of the domains of athletic training.

**ATR 250 Surface Anatomy I 3(3-0)**  
Functional human anatomy focusing on surface anatomy, palpation of anatomical landmarks, and the fundamental principles of human movement for the athletic trainer. Focus primarily on the lower body. Pre/co-requisite: ATR 150 or HSC 215.

**ATR 251 Surface Anatomy II 3(3-0)**  
Functional human anatomy focusing on surface anatomy, palpation of anatomical landmarks, and the fundamental principles of human movement for the athletic trainer. Focus primarily on the trunk and upper body. Prerequisite: ATR 250.

**ATR 300 Therapeutic Intervention 3(3-0)**  
Concepts related to therapeutic modalities and exercise. Prerequisite: ATR 150.

**ATR 340 Athletic Training Field Experience 2(Spec)**  
Content related to the admission into the athletic training graduate program. Athletic training field experience under the supervision of a preceptor. CR/NC Only. Prerequisite: ATR 150.

**ATR 350 Immediate Care 3(3-0)**  
Concepts related to emergency responses for life-threatening and non-life-threatening conditions. Prerequisite: ATR 150.

**ATR 385 Special Topics in Athletic Training 1-6(Spec)**

Selected topics/current issues of interest in athletic training not normally included in existing courses. Current course topic is listed in the semester Class Schedule. Repeatable up to 6 credits when content does not duplicate previous topics studied.

**ATR 390WI Seminar in Athletic Training 3(3-0)**

Exploration of topics in athletic training using evidence-based concepts and principles. Writing Intensive. Prerequisite: ATR 320. Co-requisites: ATR 384, 394, 430.

**ATR 394 Pharmacology in Athletic Training 2(2-0)**

Basic pharmacological principles of common medications used in the treatment of illness and injury encountered in the practice of athletic training. Prerequisites: CHM 120, 127 or 131; ATR 320. Co-requisite: ATR 384.

**ATR 397 Independent Study in Athletic Training 1-3(Spec)**

Student-initiated study guided by a faculty member. Prerequisites: Permission of Athletic Training Program Director and Course Instructor; completion of Course Contract document.

**ATR 400WI Research Methods and Evidence Based Medicine 3(3-0)**

Concepts in health care research and evidence-based medicine. Students will read, critically appraise, and summarize various types of research in athletic training. Writing Intensive. Prerequisite: ATR 300.

**ATR 415 Injury Prevention II 1(1-0)**

Application and implementation of advanced strength and reconditioning principles for the purpose of injury prevention in athletic training. Prerequisite: ATR 384, 390, 430. Co-requisites: ATR 440, 480.

**ATR 440 Athletic Training Clinical IV 1(Spec)**

Last of four clinical courses integrating didactic learning, clinical decision-making and patient care. A clinical field experience under the supervision of a preceptor is required. Prerequisites: ATR 430, 384, 394. Co-requisite: ATR 480.

**ATR 441 Pre-Internship and Professional Development 1(Spec)**

Preparation for the AT internship experience; Application process for AT certification and state credentials; Final preparation for the prospective entry-level AT professional. Prerequisites: ATR 390, 430. Co-requisite: ATR 478.

**ATR 478WI Research Methods in Athletic Training 3(3-0)**

Introduction to methods of planning, evaluating and conducting research in athletic training. Writing Intensive. Prerequisites: ATR 390, 430. Co-requisite: ATR 441.

**ATR 481 Athletic Training Practicum 3(Spec)**

A capstone experience applying athletic training didactic knowledge and clinical skills in a practical "on the job" environment concurrently with student teaching. Prerequisite: ATR 441. Co-requisite: EDU 458.

**ATR 482 Athletic Training Internship 12(Spec)**

A capstone experience applying athletic training didactic knowledge and clinical skills in a practical "on-the-job" environment. Prerequisite: ATR 441.

**ATR 500WI Clinical Research I 3(3-0)**

Planning, evaluating, and conducting research in athletic training. Writing Intensive. Prerequisite: Admission into the Graduate Athletic Training Program.

**ATR 585 Special Topics 1-3(Spec)**

Exploration of selected topics in the field of athletic training, sports medicine or other health related areas. Topic and prerequisites will be printed in Course Search and Registration materials. Repeatable up to 3 credits with different topics. Prerequisites: Determined specific to the topic presented. See Course Search and Registration.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**ATR 600 Immersive Clinical Education I 4(Spec)****ATR 605 Injury Prevention I 2(1-1)****ATR 610 Clinical Education I 1(Spec)****ATR 620 Clinical Education II 1(Spec)****ATR 680 Assessment I 3(3-0)****ATR 681 Therapeutic Modalities 3(2-1)****ATR 682 Assessment II 3(3-0)****ATR 683 Therapeutic Rehabilitation I 3(3-0)****ATR 684 Assessment III 3(3-0)****ATR 685 Therapeutic Rehabilitation II 3(2-1)****ATR 687 Manual Therapy 3(3-0)****ATR 697 Independent Study in Athletic Training 1-3(Spec)****ATR 730 Clinical Education III 1(Spec)****ATR 740 Clinical Education IV 1(Spec)****ATR 751 Professional Responsibility in Athletic Training 2(2-0)****ATR 765 Injury Prevention II 2(1-1)****ATR 775 Emergency Care 3(3-0)****ATR 780 Organization and Administration for Athletic Training 3(3-0)****ATR 786 Assessment IV 3(3-0)****ATR 790 Evidence-Based Medicine 3(3-0)****ATR 792 Cultural Competence in Health Care 3(3-0)****ATR 794 Pharmacology 2(2-0)****ATR 795 Clinical Research II 3(Spec)****ATR 799 Immersive Clinical Education II 7(Spec)****AUD - Audiology**

See the Department of Communication Sciences & Disorders for more information.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**AUD 643 Disorders of Hearing 3(3-0)****AUD 720 Anatomy and Physiology Underlying Neuro-otology 3(3-0)****AUD 730 Experimental Studies in Communication Disorders 3(3-0)****AUD 731 Diagnostic Audiology 3(3-0)****AUD 740 Neuroanatomy 3(3-0)****AUD 741 Special Topics in Audiology 1-9(Spec)****AUD 744 Occupational and Environmental Hearing Conservation 3(3-0)****AUD 750 Advanced Hearing Science 3(3-0)****AUD 752 Amplification for Individuals with Hearing Loss 3(3-0)****AUD 754 Pediatric Audiology 3(3-0)****AUD 757 Geriatric Audiology 3(3-0)****AUD 759 Introduction to Clinical Practicum: Audiology 1-6(Spec)****AUD 763 Audiological Rehabilitation Considerations in Education 3(3-0)****AUD 764 Audiologic Rehabilitation for Adults 3(3-0)****AUD 765 Cochlear Implants and Other Implantable Technologies 3(3-0)****AUD 769 Intermediate Clinical Practicum: Audiology 1-9(Spec)****AUD 771 Seminars in Audiology 3(3-0)****AUD 773 Advanced Amplification Fitting Strategies 3(2-2)****AUD 781 Electrophysiological Techniques in Audiology 3(2-2)****AUD 782 Evaluation and Management of Vestibular Disorders 3(3-0)****AUD 783 Advanced Electrophysiological and Vestibular Techniques in Audiology 3(3-0)****AUD 785 Auditory Processing Disorders 3(3-0)****AUD 849 Advanced Clinical Practicum: Audiology 1-12(Spec)****AUD 853 Psychosocial Aspects of Hearing Loss 3(3-0)****AUD 863 Professional Issues in the Practice of Audiology 3(3-0)****AUD 898 Doctoral Project 1-12(Spec)****AUD 995 Clinical Externship 1-23(Spec)****BCA - Broadcast and Cinematic Arts**

See the School of Communication, Journalism, and Media for more information.

**BCA 101 At the Movies: History and Analysis of Cinema 3(2-2)**

History and critical analysis of fiction films and filmmakers. Innovations from early silents to the present. (University Program Group I-A: Human Events and Ideas)

**BCA 210 Revolutions in Mass Media: From Gutenberg to Zuckerberg and Beyond 3(2-2)**

Examination of historical, political, economic, social and legal evolution of mass media. Emphasis on mass media and their content in a social and cultural context.

**BCA 211WI Writing for Multimedia 3(3-0)**

Introduction to creative writing and critical thinking skills to learn the various styles and formats of storytelling across media platforms. Writing Intensive.

**BCA 221 Smartphone Storytelling 3(1-4)**

Introduction to planning and producing creative audio and video content for multimedia distribution to tell audience-engaging stories. (University Program Group I-B: The Arts)

**BCA 222 Audio Production 3(1-4)**

The art and science of sound acoustics and basic audio and radio production.

**BCA 223 Video Production 3(1-4)**

Intermediate course in the fundamentals of video production, technology, theory, and practical application. Course covers crew positions, pre-production process, technology and operation of production equipment.

**BCA 265QR Understanding Media Measurement 3(3-0)**

Quantitative reasoning skills in electronic media management and media audience measurement. Quantitative Reasoning. (University Program Group III-B: Studies in Social Structures)

**BCA 270 Live Event Sound 3(1-4)**

Provides students with the basic skills to design sound systems and mix sound for live performances and events including Theatrical, Music (Concert) and Speech. Identical to TAI 270. Credit may not be earned in more than one of these courses.

**BCA 280 Drone Regulations 2(2-1)**

Introduces students to unmanned aerial systems (drone) technology, safe mission management, and FAA regulations for Part 107 certification. Identical to GEO 280. Credit may not be earned in more than one of these courses. This course may be offered in a hybrid or online format. Recommended: MTH 105 or higher.



**BCA 281 Drone Operations 1(1-1)**

Study of safe drone mission management through hands-on drone operation and applications. Prerequisite: GEO 280.

**BCA 282 Storytelling with Drones 1(1-1)**

Using drones to help tell a story through video. Prerequisites: BCA 281; BCA 221 or BCA 223.

**BCA 290 French Film and Other Media 3(3-0)**

French cinema in historical and cultural context; works of Gance, Clair, Renoir, Carle and New Wave; overview of other media; includes field trip to France. (Taught in English. Does not count toward the French major or minor.) Prerequisites: Not open to first semester freshmen. Because the course involves international travel, all students must apply through the Office of International Education.

**BCA 300 African and African American Film 3(3-0)**

Examination of films by and about Africans and African Americans. First part of course deals with African and second part with African American films. (University Program Group I-B: The Arts)

**BCA 309 Mediated Communication and Global Identity 3(3-0)**

Analysis of American and International media to identify assumptions about global citizenship and how global citizenship relates to issues such as race/ethnicity and identity. Identical to COM 309. Credit may not be earned in more than one of these courses. Prerequisites: A minimum of 12 completed credit hours. Because the course involves international travel, all students must apply through the Office of International Education. Recommended: A minimum of 56 completed credit hours. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**BCA 310 Understanding New Communication Technologies 3(3-0)**

A study of new and emerging communication technologies applied in mass media industries with emphasis on industrial, social, public policy, and technological changes.

**BCA 311WI Electronic Media Copywriting 3(3-0)**

Practice in pervasive short forms of audio and video writing: commercials, continuity, public service announcements, and campaign evolution. Writing Intensive. Prerequisites: BCA 211 with a grade of C or better; or a minimum grade of B in ENG 101, ENG 103/193, ELI 198 or ENG 201.

**BCA 317 Becoming a Media Personality 3(2-2)**

Study and practice in audio and video nonfiction performance techniques such as storytelling, commercials, podcasting, news, and live streaming for various media formats. Prerequisite: 26 completed credit hours.

**BCA 318WI Electronic Media News Writing 3(3-0)**

Techniques and principles of writing and producing news copy for electronic media. Writing Intensive. Prerequisites: BCA 211 with a grade of C or better; or a minimum grade of B in ENG 101, ENG 103/193, ELI 198 or ENG 201.

**BCA 320 Special Topics in Electronic Media 1-9(Spec)**

Consideration of subjects not listed in the regular department offerings. Repeatable when content does not duplicate previous special topics studies. Maximum credit, nine hours.

**BCA 329 Practicum in Electronic Media 1-8(Spec)**

Directed experience in electronic media. Maximum of 4 hours applicable to degree program. Only 4 hours can count toward a BCA major and 2 hours toward a minor. CR/NC only. Prerequisites: Minimum 2.25 GPA; permission of instructor.

**BCA 332 Multi-Platform Media Production 3(2-2)**

Examination of the concepts and tools for production across media platforms. Topics include mobile and social media technologies, streaming services, and content-management systems. Prerequisite: 26 completed credit hours.

**BCA 342 Field Audio Production 3(2-2)**

Study and practice of field audio recording and production techniques for electronic media application and distribution. Prerequisites: BCA 222 with a C or better.

**BCA 350 Women in Film 3(2-2)**

Critical analysis of films written, directed and produced by women, evaluated from a variety of theoretical viewpoints; emphasis on the underrepresentation of women. Identical to WGS 350. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**BCA 351 Queer Cinema 3(2-2)**

Introduction to the history, aesthetics and political/cultural importance of queer cinema. Identical to WGS 351. Credit may not be earned in more than one of these courses. Focus on the New Queer Cinema movement. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**BCA 399 Electronic Media Career Building 1(1-0)**

Strategies for obtaining entry level electronic media positions, and career building strategies for a successful career progression in electronic media. Prerequisite: BCA 210 with a C or better and a minimum of 56 completed credit hours.

**BCA 421 Advanced Audio Production 3(2-2)**

Study and practice in advanced audio recording, mixing and editing for electronic media industries. Prerequisite: BCA 222 with a grade of "C" or better.

**BCA 440 Introduction to Cinematography 3(2-2)**

Introduction to single-camera/cinema-style video production and post production, including producing, directing, lighting, camera operation and non-linear editing. Prerequisite: BCA 223 with a grade of C or better.

**BCA 441 Producing and Directing in the Studio 3(2-2)**

Introduction to multi-camera video producing and directing, including studio and field-remote production environments. Prerequisite: BCA 223 with a grade of C or better.

**BCA 451 Practicum in Electronic Media Sales 3(1-4)**

Directed sales experience at approved departmental student broadcast, cable and electronic facilities. Class serves as a capstone for the Electronic Media Sales minor. Prerequisites: MKT 340, 420; open only to signed Electronic Media Sales minors. Pre/Co-Requisites: BCA 516.

**BCA 490 Independent Study in Electronic Media 1-4(Spec)**

Student-initiated study guided by faculty or faculty committee. Maximum of 4 hours may be applied to degree. Does not fulfill requirements for a minimum of six (6) 400-500 level hours of electives in major. Prerequisites: Signed BCA major or minor; minimum BCA GPA of 3.0; Independent Study Project Prospectus approved by the study supervisor.

**BCA 499 Senior Capstone Seminar 1(1-0)**

Capstone assessment of the student's professional strengths and weaknesses plus refinement of strategies for establishing a successful post-graduate career. Prerequisites: Signed BCA major; a minimum of 105 completed credit hours.

**BCA 503WI Critiquing Mass Media 3(3-0)**

Critical appraisal of mass communications systems and content with special attention to the electronic media's aesthetic properties and economic, political and societal effects. Writing Intensive. Prerequisites: BCA 210 with a C or better or signed Cinema Studies minor or graduate standing.

**BCA 506WI Writing for the Small Screen 3(3-0)**

Creating episodic and serial television scripts from concept to pilot. Emphasis on story structure, characterization, and creative team dynamics. Writing Intensive. Prerequisites: 56 completed credit hours; or graduate standing.

**BCA 508WI Writing the Feature-Length Screenplay 3(3-0)**

Techniques, formatting styles and aesthetic strategies for writing and analyzing feature-length cinematic narrative screenplays, emphasizing characterization, plot and structure. Writing Intensive. Prerequisites: 56 completed credit hours; or graduate standing.

**BCA 510 Electronic Media Law 3(3-0)**

Regulation of the electronic media. Examination of legal and administrative materials and cases. Prerequisites: BCA 210 with a C or better and junior standing or above; or signed Cinema Arts major; or graduate standing.

**BCA 511 Electronic Media Sales 3(3-0)**

Organizational systems and processes of sales in electronic media. Emphasis on techniques found most reliable in modern sales practices in radio, television, internet and cable. Prerequisites: BCA 265; limited to junior standing or above or graduate standing.

**BCA 512 Electronic Media Promotion 3(3-0)**

Tools and techniques of promotion for electronic media. Emphasis on media needs, community relations and problems unique to the electronic media promoter. Prerequisite: Pre/Co-requisite BCA 311; limited to juniors or above; or graduate standing.

**BCA 513 Media Entrepreneurship 3(3-0)**

This class is designed to help students understand the work of a media entrepreneur and the basics of starting and running a business. Prerequisite: Junior standing or above; or graduate standing.

**BCA 515 Sports Broadcasting 3(2-2)**

Overview of the sports broadcasting industry. Emphasis on tools and techniques of live-event production and electronic sports reporting. Prerequisites: BCA 210, 317 each with C or better; or graduate standing in Broadcast and Cinematic Arts.

**BCA 516 Media Leadership 3(3-0)**

Discusses the role of media leadership. Topics include skills needed to lead companies through the production, distribution, marketing, and monetization of media content. Prerequisites: BCA 210; or signed Electronic Media Sales minor; or graduate standing.

**BCA 517 Advanced Electronic Media Performance 3(2-2)**

Study and intensive practice in complex media performance situations. Special emphasis on realistic laboratory experience designed to explore the professional requirements of electronic media talent. Prerequisite: BCA 317 with a C or better; or graduate standing.

**BCA 518 Electronic News Reporting 3(2-2)**

Techniques of news gathering, reporting, and interviewing for electronic media. Prerequisites: BCA 318 with a C or better; or graduate standing.

**BCA 520 Special Topics in Electronic Media 1-9(Spec)**

Current topics for each semester listed in Course Search and Registration. Repeatable up to 9 hours when content does not duplicate previous special topic studies. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.



**BCA 521 Advanced Cinematography 3(2-2)**

Advanced theory and practice in the production of short form narrative video, with emphasis on the aesthetic aspects of lighting, direction and editing. Prerequisites: BCA 223, 440 each with a grade of C or better; limited to juniors or above; or graduate standing.

**BCA 522 Audio Post-Production 3(2-2)**

Advanced recording, editing, sweetening, synchronizing and mixing of audio for video/film applications. Prerequisites: BCA 223, 421 both with a grade of C or better; or graduate standing.

**BCA 524 Producing Live Television 3(1-4)**

A collaborative experiential approach to writing and constructing original television programming for a variety of platforms. Utilizes an industry-standard studio to create dynamic live productions. Prerequisite: BCA 223; or BCA 318WI; or graduate standing.

**BCA 525 Film Genre Study 3-9(Spec)**

In-depth examination of selected film genres, themes and trends. Repeatable up to 9 hours when content previously studied is not duplicated. Prerequisites: Limited to juniors or above; or graduate standing.

**BCA 527 Film Directors 3-9(Spec)**

Critical examination of selected film directors, focusing on their themes and visual style. Repeatable up to 9 hours when content previously studied is not duplicated. Prerequisites: Limited to juniors or above; or graduate standing.

**BCA 528 History and Analysis of Documentary Film 3(2-2)**

History of the non-fiction film, with emphasis on narrative, aesthetic and rhetorical dimensions, as well as production, distribution and consumption conditions. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

**BCA 529 Internship in Electronic Media-Film 1-6(Spec)**

Directed work experience at participating media venues. May count 3 hours maximum toward a BCA major or minor. Minimum 2.5 GPA required. Prerequisites: Prior written approval of BCA Internship Coordinator; limited to juniors or above; open only to signed BCA majors or minors.

**BCA 531 Client Based Video Production 3(2-2)**

Lecture and intensive hands-on theory, design and production of video and interactive programs specifically for and within institutional/corporate settings. Prerequisites: BCA 223, 440 with a minimum grade of C in each; limited to juniors or above; or graduate standing.

**BCA 532 Advanced Video/Multimedia Post-Production 3(2-2)**

Lecture and intensive hands-on theory, design and production of multimedia/interactive digital video, with emphasis on advanced post-production technologies and techniques. Prerequisites: BCA 223, 440 with a grade of C or better; or graduate standing.

**BCA 533 The Power of Hybrid Media 3(2-2)**

Analysis and discussion of post-broadcast and hybrid media practices as they relate to politics, society, and representation. Emphasis on streaming, mobile, and social media platforms. Prerequisites: BCA 332; or graduate standing.

**BCA 540WI Recording Industry and Business 3(3-0)**

Exploration of the music recording industry, music copyrights and music industry business and marketing strategies to reach consumers. Writing Intensive. Prerequisites: Limited to juniors or above; or graduate standing.

**BCA 542 Contemporary Recording and Mixing 3(2-2)**

Advanced recording, mixing and mastering techniques of contemporary music for multimedia distribution. Summer session only. Laboratory hours arranged with instructor. Prerequisites: BCA 421 with a grade of B or better; or graduate standing in Broadcast and Cinematic Arts.

**BCA 560 Radio Operations I 3(1-4)**

Preparation and performance in radio broadcast practices, emphasizing daily operations and radio management principles. Summer Session I only. Laboratory hours arranged with instructor. Prerequisites: Minimum 2.25 GPA, BCA 222 or 317; or graduate standing in Broadcast and Cinematic Arts.

**BCA 571 Telecommunications Media Policy 3(3-0)**

Learn how the legal and economic policies that impact the structure, functions, and prospects of American electronic media systems are created and managed. Prerequisite: BCA 510 and 56 completed credit hours; or graduate standing.

**BCA 575 Film Theory and Criticism 3(3-0)**

Survey and application of major film theories. Prerequisites: BCA 101 and 56 completed credit hours; or graduate standing.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**BCA 600 Introduction to Electronic Media Research and Writing 3(3-0)****BCA 601 Theories of Mass Communication 3(3-0)****BCA 603 Qualitative Mass Communication Research Methods 3(3-0)****BCA 604 Quantitative Mass Communication Research Methods 3(3-0)****BCA 612 Electronic Media Seminar 3(3-0)****BCA 619 Continuing Registration for Final Research Project 1(1-0)****BCA 720 Special Topics in Mass Media 3-9(Spec)****BCA 729 Advanced Independent Study in Electronic Media 1-9(Spec)****BCA 730 Plan B Project Research 3(3-0)****BCA 798 Thesis 1-6(Spec)****BIO - Biology**

See the Department of Biology for more information.

**BIO 100 Introduction to Field Biology at Beaver Island 3(1-4)**

This is an introductory course in field biology that is open for concurrent enrollment by high school students as well as college students interested in an introduction to field techniques. Students are expected to have an interest in field biology, basic mathematical skills, and an ability to locate information.

**BIO 101 General Biology 3(2-2)**

The study of living organisms. Fundamental principles of biology are integrated with local and global issues of current interest. No credit toward Biology major or minor. Students may only earn credit in one of the following: BIO 101 or BIO 105. Satisfies University Program Group II laboratory requirement. (University Program Group II-A: Descriptive Sciences)

**BIO 105QR Introductory Quantitative Biology 3(2-2)**

Introduction to basic biological principles, including quantitative treatments of ecology, evolution, cellular processes, genetics and diversity. No credit towards Biology Major or Minor. This course may be offered in an online or hybrid format. Satisfies University Program Group II laboratory requirement. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Sciences)

**BIO 110 Concepts of Biology 4(3-3)**

Fundamental concepts of biology including the chemical basis of life, cell structure and function, molecular and transmission genetics, evolution and ecology. May be applied towards fulfilling the requirements of any Biology major or minor. Students may only earn credit in one of the following: BIO 101, BIO 105, or BIO 110. Satisfies University Program Group II laboratory requirement. Recommended: High school chemistry or CHM 120 and 127 or 131 or 161. (University Program Group II-A: Descriptive Sciences)

**BIO 111 Foundations of Evolution and Diversity 4(3-3)**

Basic principles of evolution and the application of these principles to the history and diversity of life. Satisfies University Program Group II laboratory requirement. (University Program Group II-A: Descriptive Sciences)

**BIO 112 Foundations of Cell Biology 4(3-3)**

Structure and function of bacteria, archaea, and eukaryotic cells including biological molecules, bioenergetics, membrane transport, respiration, photosynthesis, cell communication, and cell division. Prerequisite: BIO 111 with a C- or better. Prerequisite/Co-requisite: CHM 131.

**BIO 151 Human Biology 3(3-0)**

An introduction to human biology as a scientific discipline. Topics include cell biology, genetics, organ systems, biotechnology, and current issues. This course may be offered in a hybrid or online format. This course may not be used to satisfy the requirements for a Biology major or minor. (University Program Group II-A: Descriptive Sciences)

**BIO 165 Life Science for Elementary Teachers 3(2-3)**

Survey of life science content aligned with state and national science education standards and introduction to science pedagogy for students seeking elementary teaching certification. This course satisfies the Group II laboratory requirement. Does not count toward Biology major or the Biology minor. (University Program Group II-A: Descriptive Sciences)

**BIO 197 Special Topics in Biology 1-4(Spec)**

Topics of special interest that are not normally included in existing courses. The specific topic will be announced in Course Search and Registration.

**BIO 208 Microbiology 4(3-3)**

Core concepts of microbiology from a human perspective. Does not count toward Biology majors or minors. Prerequisite: one of: BIO 101, BIO 105, BIO 110, BIO 112, BIO 151.

**BIO 211 Foundations of Genetics 4(3-3)**

Foundations and applications of molecular and transmission genetics in a diversity of organisms. Prerequisite: BIO 112 with a C- or better. Prerequisite/Co-requisite: CHM 132.

**BIO 212 Foundations of Form and Function 4(3-3)**

An integrative and comparative survey of plants, animals and microbes, with emphasis on their form and function. Prerequisite: BIO 211 with a grade of C- or better. Pre/Co-requisite: BIO 213.

**BIO 213 Foundations of Ecology 4(3-3)**

Study of the relationship between organisms and their environment. Prerequisite: BIO 112 with C- or better.

**BIO 229 Nature Study 3(2-3)**

Introduction to the ecology and evolution of organisms, populations, and communities of the Great Lakes Region. Emphasizes identification of characteristic flora and fauna. Does not count toward Biology majors or the Biology minor. This course satisfies the University Program Group II laboratory requirement. (University Program Group II-A: Descriptive Sciences)

**BIO 240 Conservation of Natural Resources 3(3-0)**

Ecological approaches to issues of global environmental sustainability, with emphasis on preservation of natural resources such as soil, water, forests, and wildlife. May be offered as Writing Intensive. (University Program Group II-A: Descriptive Sciences)

**BIO 297 Special Topics in Biology 1-6(Spec)**

Topics of special interest not normally included in existing courses. Specific topics and additional prerequisites (if needed) will be announced in Course Search and Registration. Prerequisite: One of: BIO 101, 105, 111.

**BIO 306 Natural History of Vertebrates 3(2-3)**

Vertebrate natural history emphasizing evolution, systematics, identification and general ecology studied through lecture, discussion, field trips and laboratory work. Includes experience in specimen preparation. Prerequisites: BIO 212, BIO 213 both with a grade of C- or better; or BIO 218.

**BIO 315 Human Genetics 3(3-0)**

Transmission, molecular, and population genetics as it relates to human inheritance, medical syndromes, epigenetics, and genetic counseling. This course may be offered in an online format. Does not count toward Biology major or minor.

**BIO 318 Introduction to Animal Behavior 3(3-0)**

This course covers concepts of animal behavior in invertebrate and vertebrate organisms, including antipredator, foraging and social behaviors, and behaviors associated with reproduction and cognition. This course does not count toward the Biology majors or the Biology minor. Recommended: One of: BIO 101, BIO 105QR, BIO 111, BIO 151, BIO 165; completion of at least 26 credit hours.

**BIO 320 Biology of Microorganisms 4(3-3)**

General microbiology course that explores the cell structure, metabolism, genetics, and diversity of microorganisms. Prerequisites: BIO 212, 213 both with a C- or better.

**BIO 321WI Introduction to Conservation Biology 3(3-0)**

Interdisciplinary investigation exploring conservation of biological diversity from the gene, population, species, ecosystem, landscape, and global levels. Writing Intensive. Prerequisites: BIO 212, 213 both with a C- or better.

**BIO 322WI Freshwater Conservation 3(2-2)**

Problems associated with the misuse of a limited freshwater resource. Topics include ecosystem function and impairment, management strategies, rehabilitation techniques and public policy. Writing Intensive. Prerequisites: BIO 212, 213 both with a C- or better.

**BIO 324 Eukaryotic Cell Biology 3(3-0)**

Eukaryotic cellular structure and function, including experimental methods, membranes, trafficking, signaling, cytoskeleton, the cell cycle, and other cellular processes. Prerequisites: BIO 212, 213 both with a C- or better.

**BIO 325 Biotechnology 3(1-5)**

Laboratory experience emphasizing the theory and practice of techniques used in basic cell and molecular biology research and their applications in biotechnology. May be offered as Writing Intensive. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 211 with a grade of C- or better and a signed major in Biochemistry or Neuroscience; or BIO 324 or 326; CHM 132.

**BIO 330 Light Microscopy 3(2-2)**

Principles and practice of light microscopy including the use of dissecting, brightfield, and fluorescence microscopes; sample preparation of living and preserved specimens; and image analysis. Pre/Co-requisite: BIO 211.

**BIO 334 Soil Science 3(2-2)**

A lecture/field course introducing the physical, chemical, and biotic properties of soils, soil classification and mapping, and soil resource issues. Identical to GEO 334. Credit may not be earned in more than one of these courses. Prerequisites: CHM 120 or 131; one of the following: GEO 105, GEL 100, GEL 101, GEL 105, GEL 130QR, ENS 101QR; or BIO 212, BIO 213 both with a C- or better.

**BIO 337 Comparative Vertebrate Anatomy 4(3-3)**

Comparison of the anatomy of vertebrates and close relatives with emphasis on evolutionary interpretation, systematics, ontogeny, functional morphology and adaptation. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 218.

**BIO 338 Human Ecology 3(3-0)**

The relationship of humans to their environment and the environmental consequences of human activities. Topics include climate change, biological invasions, biodiversity loss, emerging infectious diseases. Does not count toward biology majors or the biology minor. This course may be offered in an online format. This course may be offered as Writing Intensive.

**BIO 340 Ecology 3(2-3)**

Study of the relationships between organisms and their environment. Prerequisites: One of: BIO 101, 105, 110. Recommended: BIO 203 or 218.

**BIO 350WI Water as Life, Death, and Power 3(3-0)**

*Problems of water access, water-borne pathogens, water treatment, and power relationships in global cultures from anthropology, biology, and chemistry perspectives. Identical to ANT 350WI and CHM 350WI. Credit may not be earned in more than one of these courses. May not be applied to any Biology major or the Biology minor. May not be applied to Chemistry or Biochemistry major or minor. Writing Intensive. Prerequisites: Completion of 56 hours. Recommended: ANT 171 or 170; BIO 101 or 110 or 111; CHM 111 or 120 or 131. (University Program Group III-B: Studies in Social Structures)*

**BIO 365 Environmental Contaminants 3(3-0)**

Survey of pesticide characteristics, hazardous wastes, ground and surface water contaminants, air pollution, acid rain, and other environmental pollution concerns. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 208, CHM 132 and a signed Environmental Health and Safety major; or BIO 211, CHM 132 and a signed Biochemistry major.

**BIO 366 Freshwater Biology 3(2-3)**

An introduction to the ecology of freshwater systems with an emphasis on the natural history, identification, and collection of freshwater organisms. Prerequisites: BIO 212, 213 both with a C- or better.

**BIO 367 Introduction to Marine Sciences 3(3-0)**

This course will familiarize students with the biology of marine life. Physical factors, communities, and human impacts on the world's oceans will be presented. Prerequisites: BIO 212, 213 with a grade of C- or better; or BIO 218 with a grade of C- or better. Recommended: CHM 131.

**BIO 390 Comparative Animal Physiology 4(3-3)**

The study of the diversity of physiological mechanisms in animals, with emphasis on inter-species comparisons to highlight patterns of physiological adaptation. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 218 and one of: CHM 132, 342.

**BIO 391 Plant Physiology 4(3-3)**

The study of plant function including processes such as photosynthesis, water movement, growth and development, and plant response to environmental stress. Prerequisites: BIO 203 or BIO 212, BIO 213 with a C- or better; CHM 120, CHM 127 or CHM 132. Recommended: CHM 421 or CHM 425.

**BIO 392 Mammalian Physiology 4(3-3)**

The functioning of the mammalian body and its component parts, with an emphasis on human systems. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 208 or 211 with a C- or better and one of the following: a signed major in biology in any option, biology/biomedical sciences, biochemistry, dietetics, exercise science, neuroscience, or a signed science minor; CHM 132 or 342.

**BIO 397 Special Topics in Biology 1-6(Spec)**

Topics of special interest not normally included in existing courses. Specific topics and additional prerequisites (if needed) will be announced in Course Search and Registration. Prerequisites: BIO 212, 213 both with a C- or better.

**BIO 403WI Undergraduate Research 3-4(Spec)**

Faculty-supervised research experience in the biological sciences. Requires planning with a faculty mentor the semester prior to enrollment. Writing Intensive. Prerequisites: BIO 212, 213 both with a grade of C- or better; permission of department chairperson. Recommended: Cumulative GPA of B (3.0) or better in all BIO courses.

**BIO 435 Environmental Toxicology 3(3-0)**

Introduction to toxic agents in the environment, the associated biological response in humans or animals, and evaluation of potential health risks. Prerequisites: BIO 101 or BIO 212, 213, both with a C- or better; One of: CHM 342, 343, 345.

**BIO 440 Wildlife Ecology 3(3-0)**

Examination of wildlife ecology as it pertains to the conservation and management of both game and nongame wildlife populations and their habitats. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 340.

**BIO 487 Recent Advances in Neuroscience Seminar 2(2-0)**

Analysis of current research in specified areas of neuroscience; students will learn to read, analyze, critique, and present primary literature. Identical to PSY 487. Credit may not be earned in more than one of these courses. Prerequisites: NSC 302; signed Neuroscience major.

**BIO 490 Biomedical Sciences Seminar 1-3(Spec)**

Seminar course covering variable topics in an area of biomedical science. Students may repeat this course for a maximum of 3 credits. Prerequisites: BIO 324, 326, 392 or BIO 212, 213 both with a C- or better.

**BIO 495 Undergraduate Internship in Biology 1-4(Spec)**

An in-depth work experience in the student's area of interest performed under a trained professional in the selected area of biology. Prerequisites: BIO 212 and 213 both with a grade of C- or better; signed Biology Major or Minor.

**BIO 497 Special Topics in Biology 1-9(Spec)**

Topics of special interest that are not normally included in existing courses. Specific topics and instructor's prerequisites will be announced in Course Search and Registration. Prerequisites: BIO 212, 213 both with a grade of C- or better; Completion of 56 semester hours; See Course Search and Registration.

**BIO 500 Biological Statistics 3(2-2)**

Analyze biological data by appropriately selecting, assessing, and interpreting results of statistical tests including chi-squared analyses, t-tests, one-way ANOVA and correlation/regression. Prerequisites: BIO 212, 213 with a C- or better; or BIO 211 and a signed major in Neuroscience or Biochemistry; or graduate standing. Recommended: MTH 130.

**BIO 501 Evolution 3(3-0)**

Mechanisms of descent with modification are discussed in a framework of microevolution, speciation, and macroevolution. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 326; or admission to the Biology M.S., Conservation Biology M.S., Biochemistry, Cell and Molecular Biology M.S., Biochemistry, Cell and Molecular Biology Ph.D. program, or Earth and Ecosystem Sciences Ph.D. program.

**BIO 509 Ichthyology 4(3-3)**

Anatomy, taxonomy, physiology, natural history, and ecology of fishes with laboratory emphasis on fishes of the Great lakes region. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 218; or graduate standing.

**BIO 510 Fisheries Biology and Management 4(3-3)**

Analysis of fish populations, management of fisheries resources, and other problems related to freshwater fisheries. Prerequisites: BIO 212, 213 both with a C- or better; or admission to the Biology M.S., Conservation Biology M.S., or Earth and Ecosystem Sciences Ph.D. program.

**BIO 511 Aquatic Insects 3(1-4)**

Organismal biology of stream insects. Includes identification of insect orders, factors influencing their distribution, and the use of insect assemblages as indicators of water quality. Prerequisites: BIO 212, 213 both with a C- or better; or admission to the Biology M.S., Conservation Biology M.S., or Earth and Ecosystem Sciences Ph.D. program.

**BIO 515 Ornithology 4(2-4)**

An introduction to avian biology emphasizing evolution, systematics, and the annual cycle. Identification, song, and general ecology are studied through field trips and laboratory work. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 218; or graduate standing.

**BIO 516 Avian Field Experience 2(1-1)**

A field experience in birding and mist-netting with emphasis on bird identification, bird banding, migration and avian conservation. Prerequisites: BIO 212, BIO 213 both with a C- or better; or graduate standing.

**BIO 518 Animal Behavior 4(3-3)**

Behavioral adaptations in animals, including foraging, reproductive, and social behaviors. May be offered as Writing Intensive. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 218; or graduate standing within CSE.

**BIO 519 Invertebrate Diversity 4(2-4)**

An advanced review of the evolution and ecology of invertebrates emphasizing the identification, collection, and conservation of aquatic macroinvertebrates in the Great Lakes region. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 218; or admission to the Biology M.S., Conservation Biology M.S., or Earth and Ecosystem Sciences Ph.D. program.

**BIO 520 Great Lakes Mollusks 2(1-3)**

An examination of the ecology, life history, taxonomy, evolution, and conservation status of freshwater mollusks (bivalves and gastropods) from the Great Lakes region. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 218; or graduate standing.

**BIO 523 Ecology and Systematics of Freshwater Algae 3(2-3)**

Examination of the systematics and ecology of freshwater algae using a systems approach to identify native assemblages in wetlands, streams, lakes, and the Great Lakes. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 218; or admission to the Biology M.S., Conservation Biology M.S., or Earth and Ecosystem Sciences Ph.D. program.

**BIO 524 Molecular Biology 3(3-0)**

Molecular nature of genes and recombinant DNA techniques, explored through the analysis of experimental data. Prerequisites: BIO 326, CHM 346; or graduate standing. Recommended: CHM 521, 522.

**BIO 525 Plant Ecology 3(2-3)**

Evaluates the interrelations between plants and their environment with an emphasis on how and why plants influence the productivity, diversity, and biogeochemistry of geographic regions. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 203; or admission to the Biology M.S., Conservation Biology M.S., or Earth and Ecosystem Sciences Ph.D. program.

**BIO 526 Limnology 3(3-0)**

Physical, chemical, and biological properties of inland aquatic ecosystems focusing on lakes. Topics include basin origin, light, mixing, organism diversity, nutrient cycling, and food webs. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 340; or graduate standing. Recommended: One of: CHM 120, 132, 161.

**BIO 527 Limnological Methods 2(0-4)**

A quantitative examination of the physical, chemical and biological aspects of lake ecosystems. Pre/Co-requisite: BIO 526 or admission to the Biology M.S., Conservation Biology M.S., or Earth and Ecosystem Sciences Ph.D. program.

**BIO 534 Endocrinology 3(3-0)**

Endocrine system function including major endocrine glands, hormone synthesis, mechanisms of hormone action, and regulation of key body functions. Prerequisites: BIO 212, 213, 392 all with a grade of C- or better; or graduate standing.

**BIO 536 Histology 3(2-3)**

Study of cells and tissues that comprise human organ systems with emphasis on their integration and function using light microscopy. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 390 or 392; or admission to the Biology M.S., Biochemistry, Cell and Molecular Biology M.S., Biochemistry, Cell and Molecular Biology Ph.D. program, or Earth and Ecosystem Sciences Ph.D. program.

**BIO 537 Immunology 3(3-0)**

A description of the biological and biochemical mechanisms of the immune response. Emphasis will be placed on adaptive immunity activation, immunobiology, and immune system dysfunction. Prerequisites: BIO 212, 213 both with a C- or better and one of: BIO 320, 324, 392; or BIO 211 with a C- or better, BIO 392, and a signed major in biochemistry or neuroscience; or admission to the Biology M.S., Chemistry M.S., Biochemistry, Cell and Molecular Biology M.S., or Biochemistry, Cell and Molecular Biology Ph.D. program. Recommended: CHM 425 or 521.

**BIO 539 Virology 3(3-0)**

Basic principles of viral structure and replication. Provides a detailed survey of viruses, including emergent viral pathogens. Explores viral evolution, anti-viral drugs and vaccines. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 324, 326; or graduate status in the College of Science and Engineering.

**BIO 540 Mammalogy 4(3-3)**

Survey of evolution, taxonomy, behavioral ecology, physiological ecology, conservation biology, and management as these relate to Class Mammalia. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 218; or graduate standing.

**BIO 541 Wildlife Biology and Management 4(2-4)**

Presents the basic ecological principles and the varied techniques utilized in managing the wildlife resource. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 340; or graduate standing.

**BIO 544 Developmental Biology 4(3-3)**

Patterns and cellular/molecular mechanisms of embryonic development, emphasizing animals. May be offered as Writing Intensive. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 211 with a C- or better and a signed major in Biochemistry or Neuroscience; One of: CHM 342, 346, 348; or admission to a graduate program in the College of Science and Engineering.

**BIO 545 Molecular Genetics 3(3-0)**

Genetic approach to fundamental biological problems. Covers genetic techniques and modern molecular methods, including recombinant DNA technology and functional genomics in model systems and humans. May be offered as Writing Intensive. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 211 with a C- or better and a signed major in Biochemistry or Neurosciences; or BIO 326; CHM 342 or 346; or graduate standing.

**BIO 546 Molecular Genetics Laboratory 1(0-3)**

Laboratory course, to accompany BIO 545, explores genetic techniques and modern molecular methods, including recombinant DNA technology and functional genomics in model systems. Pre/Co-requisites: BIO 545.

**BIO 549 Herpetology 3(2-3)**

Survey of the ecology, evolution, and conservation of amphibians and reptiles. Includes laboratory and field observations, experiments, and traditional review of major morphological features. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 218; or admission to a graduate program in the College of Science and Engineering.

**BIO 550 Transmission Electron Microscopy 4(1-6)**

Biological specimen preparation and examination using transmission electron microscopy. Use of digital photography in electron micrograph production. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 330; or graduate standing.

**BIO 552 Scanning Electron Microscopy 4(3-3)**

Principles and techniques of SEM including biological specimen preparation and examination. Use of digital photography in electron micrograph production. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 324; BIO 330; or graduate standing.

**BIO 553 Confocal Microscopy 3(2-3)**

Principles and practice of biological confocal laser scanning microscopy, including sample preparation and the use of molecular probes. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 324; BIO 330; or graduate standing.

**BIO 555 Great Lakes Wetland and Aquatic Plants 4(2-4)**

The biology of wetland plants including: identification, systematics, and ecology. Students will visit wetlands throughout Michigan and learn to identify common wetland and aquatic plants. Prerequisites: BIO 203 or graduate standing.

**BIO 557 Woody Plants of Michigan 4(2-4)**

The biology of woody plants including their identification, anatomy and physiology, systematics, ecology and evolution. Students will learn Michigan native trees and shrubs. Prerequisites: BIO 203; or BIO 212, 213 with a grade of C- or better; or graduate standing.

**BIO 560 Avian Ecology 3(2-3)**

The behavior, community organization, and ecological relationships of birds are examined through discussion of current literature, investigative field work, and other techniques. May be offered as Writing Intensive. Prerequisites: BIO 212, 213 both with a C- or better; or graduate standing. Recommended: BIO 515.

**BIO 561 Wetland Ecology and Management 3(3-0)**

Students will study structure and function of wetland ecosystems. Chemical, physical, and biological processes will be put into the context of conservation, management, and restoration. Prerequisites: BIO 212, 213 both with a C- or better; or graduate standing.

**BIO 562 Plant Systematics and Evolution 4(3-3)**

In-depth study, covering important topics in plant identification, evolution and systematics. Prerequisites: BIO 203 or graduate standing.

**BIO 565 Microbial Diversity and Physiology 3(3-0)**

This course explores the diversity of microorganisms, including methods for classifying microorganisms and assessing their diversity, and a detailed survey of microbial metabolic diversity. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 208 or 320; or graduate status in the College of Science and Engineering.

**BIO 566 Microbial Diversity and Physiology Laboratory 1(0-3)**

This is an advanced laboratory course that explores experimental techniques used to study the diversity and physiology of microorganisms. This laboratory course accompanies BIO 565. Pre/Co-requisite: BIO 565.



**BIO 567WI Biogeochemistry 3(3-0)**

Examines the molecular mechanisms by which microorganisms drive the cycling of Earth's major elements. Writing Intensive. Prerequisites: BIO 212, 213 both with a grade of C- or better; or BIO 208; CHM 132; or graduate standing in a CSE program.

**BIO 570 Medical Cell Biology 3-4(Spec)**

A course that explores advanced topics in cell biology relevant to human health and disease, and focuses on experimental techniques and reading the primary literature. This course may be offered with or without a laboratory. May be offered as Writing Intensive. Prerequisites: BIO 324 or 392; or graduate status.

**BIO 572 Epigenetics 3(3-0)**

The principles of epigenetics including environmental effects, molecular modifications, and inheritance. Examples using development, evolution, and disease in microbes, plants, and animals will be included. Prerequisites: BIO 212, 213 both with a C- or better; or graduate standing.

**BIO 573 Applied Genomics 3(3-0)**

Application of genomics tools (bioinformatics software) to genomic annotation. Topics include next generation sequencing (NGS), assembly, alignment, gene finding (annotation) of DNA and RNA sequences. Prerequisites: BIO 212, 213 with a C- or better; or BIO 315 with a C- or better and a signed Biological Analytics minor; or graduate standing in a Master's or Ph.D. program in the College of Science and Engineering.

**BIO 575 Applied Bioinformatics 4(3-3)**

Application of bioinformatics techniques. Topics include: gene finding, pairwise and multiple sequence alignments of DNA and protein sequences, and the use of GenBank and BLAST. Prerequisites: BIO 212, 213 with a C- or better; or BIO 315 with a C- or better and a signed Biological Analytics minor; or graduate standing in a Master's or Ph.D. program in the College of Science and Engineering.

**BIO 576WI Mammalian Cell Culture 3(1-5)**

Practical aspects of mammalian cell culture, aseptic technique, cell maintenance, differentiation, and cryopreservation. Writing Intensive. Prerequisites: BIO 212, 213 both with a C- or better; or graduate standing.

**BIO 580 Medical Microbiology 3(1-5)**

Focuses on the relationships between humans and pathogenic microbes. Covers major groups of medically important microorganisms, pathological consequences of infection, and clinical case problem-solving. Prerequisites: BIO 212, 213 both with a C- or better; or BIO 208, one of BIO 392 or HSC 215 all with a C- or better, and a signed major in Neuroscience or Biochemistry or Exercise Science; or graduate standing.

**BIO 585 Conservation Medicine 3(3-0)**

Examines various diseases and their importance to wildlife, domestic animals, and humans. Epidemiology and ecology of diseases are discussed within the framework of conservation medicine. Prerequisites: BIO 212, 213 with a C- or better; or graduate standing.

**BIO 590 Cardiovascular Physiology 3(3-0)**

Basic principles of normal mammalian cardiovascular physiology. Prerequisites: BIO 392 or graduate standing.

**BIO 591 Neurophysiology 3(3-0)**

Principles of nervous system function: cytology, electrophysiology, ion channels, membrane potentials, neurochemistry, synaptic function and its modification, sensory physiology. Prerequisites: BIO 392.

**BIO 592 Developmental Neurobiology 3-4(Spec)**

Principles of brain development, including neural stem cells, axon guidance, synaptogenesis, critical periods and plasticity. May be offered with or without a Journal Club. Prerequisites: Completion of 56 semester hours and C- or better in one of: BIO 211, NSC 301; or graduate standing.

**BIO 595 Cancer Biology 3(3-0)**

Examination of the underlying molecular, cellular, and genetic pathways involved in carcinogenesis, tumor growth, angiogenesis, and metastasis. Additional topics include tumor immunology and treatment strategies. Prerequisites: BIO 212, 213 both with a grade of C- or better, or BIO 324, 326; CHM 342 or 343 or 345; or graduate standing. Recommended: CHM 520 or 521.

**BIO 597 Special Topics in Biology 1-9(Spec)**

Topics of special interest that are not normally included in existing courses. Specific topics and instructor's prerequisites will be announced in Course Search and Registration. Prerequisites: BIO 212, 213 both with a grade of C- or better; completion of 56 semester hours; or graduate standing; additional instructor prerequisites will be announced in the Course Search and Registration.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**BIO 600 Biological Research Design and Analysis 3(2-2)****BIO 610 Biology Colloquium 1-9(Spec)****BIO 619 Continuing Registration for Final Research Project 1(1-0)****BIO 620 Advanced Topics in Biology 1-9(Spec)****BIO 626 Topics in Genetics 1-3(Spec)****BIO 629 Topics in Eukaryotic Molecular Genetics 1-4(Spec)****BIO 630 Art of Scientific Communication 3(2-1)****BIO 637 Topics in Immunology 1-3(Spec)****BIO 642 Advanced Statistical Methods for Research 3(3-0)****BIO 650 Population and Community Ecology 4(3-2)****BIO 651 Topics in Ethology 1-4(Spec)****BIO 652 Behavioral Ecology 3(2-3)****BIO 653 Stream Ecology 3(2-3)****BIO 656 Fish Ecology 2(2-0)****BIO 657 Fisheries Management 2(2-0)****BIO 658 Zooplankton Biology 3(2-3)****BIO 680 Conservation Biology 3(3-0)****BIO 690 Conservation Genetics 4(3-3)****BIO 691 Landscape Ecology 4(3-3)****BIO 692 Topics in Physiology 1-4(Spec)****BIO 695 Graduate Internship in Biology 1-6(Spec)****BIO 730 Seminar 1(1-0)****BIO 790 Research in Biology 2-4(Spec)****BIO 798 Thesis 1-9(Spec)****BIS - Business Information Systems**

See the Department of Business Information Systems for more information.

**BIS 100 Introduction to Business 3(3-0)**

Introduction to principles and problems of interrelated functions of business. Business organizations as social structures and their interaction with the domestic and global environments.

**BIS 101WI Essential Business Communication Skills 3(3-0)**

A focus on developing effective business communication skills and understanding their impact on career success. Writing Intensive. Pre/Co-requisite: BUS 100.

**BIS 104 Computers and Society 3(3-0)**

Fundamental concepts and applications of computers. Impact of the computer on human events and social institutions. Control, predictions, and implications of future computer developments. Does not count on CPS major or minor.

**BIS 190 Entrepreneurship for Small Business 3(3-0)**

Basic entrepreneurship information. For non-business students only. Prerequisite: Permission of instructor.

**BIS 197 Special Studies in Business Information Systems 1-12(Spec)**

Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. Prerequisites: See Course Search and Registration.

**BIS 221 Computers in Business I 3(3-0)**

The management-oriented study of computer information systems in business, including model building and decision support. Includes coverage of leading software packages used in business. Prerequisite: 26 credits completed with 2.0 minimum GPA.

**BIS 228 Applications Development 3(3-0)**

Introduction to business applications development using rapid development programming tools.

**BIS 255 Information Systems 3(3-0)**

An introduction to the development and use of Information Systems (IS) in business, including the use of software applications to solve business problems. Prerequisites: 26 Credits completed with 2.0 minimum GPA.

**BIS 260WI Global Business Communication 3(3-0)**

A focus on business communication knowledge and skills necessary for success in the global business environment. Writing Intensive. Prerequisites: Grade of C or better in ENG 101, ENG 103/193, or ELI 198.

**BIS 297 Special Studies in Business Information Systems 1-12(Spec)**

Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. Prerequisites: See Course Search and Registration.

**BIS 308 Visual Business Communication and Digital Media 3(3-0)**

Evaluating and designing visuals and digital media in a business setting. Work of students contributes to a professional portfolio. Recommended: BIS 104 or CPS 100 or BIS 221 or BIS 255.

**BIS 315 Social Media and Emerging Technologies in Business 3(3-0)**

Design and implementation of social media strategies using emerging technologies in real-world business settings. Prerequisite: BUS 100 or BIS 100.

**BIS 320 Systems Analysis and Design 3(3-0)**

Fundamentals of business systems analysis and design; study of present system, developing system alternatives. Prerequisites: BIS 221 or BIS 255; 56 semester hours completed.



**BIS 323 Spreadsheet-Based Modeling for Business 3(3-0)**

The course focuses on the use of spreadsheets in business analytics. Students gain modeling/analysis skills necessary to address a wide variety of business problems. Prerequisites: BIS 255.

**BIS 324 Seminar in Applications Development 3(3-0)**

Development of business applications using selected programming languages and tools. Prerequisites: BIS 228; 56 hours completed and admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 327 Web Site Development 3(3-0)**

Development of Internet and intranet web sites to support business functions including doing business on the Internet with emphasis on issues involved in designing and deploying this information technology by organizations. Prerequisite: 56 semester hours completed or listed on a signed major or minor.

**BIS 328 Web Applications Development 3(3-0)**

Development of web-based mobile applications to support business functions with an emphasis on issues related to application design and deployment. Prerequisites: BIS 228, BIS 327; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 342 Intercultural Business Communication Abroad 1-9(Spec)**

*Experiential learning-based course incorporating study abroad. Students learn and demonstrate tools and knowledge necessary for interaction in a professional setting within a foreign culture. This course may be offered as Writing Intensive. Prerequisites: ENG 101 or BIS 101 or COM 101 or COM 195. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition, Option 2)*

**BIS 347 Enterprise Software in Business Using SAP Software 3(3-0)**

The concepts, fundamentals, technical structure, and implementation issues of business enterprise software are introduced using SAP as a tool. Prerequisite: BIS 104 or CPS 100 or BIS 221 or BIS 255.

**BIS 357 ABAP Programming Fundamentals 3(3-0)**

Application of ABAP programming language to implement business processes using the SAP system as an example of contemporary enterprise software. Prerequisites: BIS 228, BIS 347; 56 semester hours completed and admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 360WI Applied Business Communication 3(3-0)**

A focus on advanced business communication skills. Students will apply effective business communication principles in expanding oral, written, and employment communication skills. Writing Intensive. Prerequisite: 56 semester hours completed. Recommended: ENG 201.

**BIS 380 Enterprise Architecture 3(3-0)**

Study of infrastructure issues relevant to the design, selection, implementation, and management of an organization's enterprise architecture. Prerequisites: BIS 221 or 255; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 397 Special Studies in Business Information Systems 1-12(Spec)**

Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. Prerequisites: See Course Search and Registration.

**BIS 422 Database Management Systems 3(3-0)**

Study of database concepts with an emphasis on their application to business systems. Prerequisites: BIS 228; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 423 Decision Support Systems and Business Intelligence 3(3-0)**

Analysis and design of information systems permitting the computer to become an integral part of the managerial decision-making process. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 424 E-Business Applications Development 3(3-0)**

Study of the development and use of e-business applications. Special emphasis will be given to current development technologies and tools. Prerequisites: BIS 228, BIS 327, BIS 422; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 425 Information Systems Development Project 3(3-0)**

Project course requiring students to develop and implement a computer-based information system. Prerequisites: BIS 420, BIS 422; 86 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 456 Business Analytics Using SAP Software 3(3-0)**

A study of business intelligence solutions using SAP software. Tools covered include SAP Business Warehouse (BW) and SAP BusinessObjects software. Prerequisites: BIS 247 or BUS 301 or BUS 331.

**BIS 458 Configuration and Implementation using SAP Software 3(3-0)**

Concepts and application of configuring SAP software for enterprise deployment in business organizations. SAP functions matched with business requirements are configured using the implementation guide. This course may be offered in an online format. Prerequisites: BIS 347 or BUS 301 or BUS 331; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 470 Applied Business Communication Integrated Capstone 3(3-0)**

Using effective business practices and collaboration in preparing and delivering appropriate business reports and communication as a logical approach to solving business problems. Prerequisite: BIS 360; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 490 Internship in Information Systems 3(Spec)**

A full-time or part-time experience during one or more semesters in an organization. A written report is required. Prerequisites: Permission of department chairperson; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 491 Independent Study 1-3(Spec)**

Student-initiated study guided by a faculty member. Prerequisites: 86 semester hours completed; minimum GPA of 3.0; permission of department chairperson; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 495 Internship in Applied Business Communication 1-6(Spec)**

A full-time or part-time work experience for one or more semesters dealing with aspects of business and organizational communication. Prerequisite: Permission of department chairperson or major advisor; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BIS 497 Special Studies in Business Information Systems 1-12(Spec)**

Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. Prerequisites: See Course Search and Registration.

**BIS 502 Network Fundamentals 3(3-0)**

Basic concepts of network communication using the Open Systems Interconnection (OSI) model, as well as media, access protocols, routing, reliability, and network services. Prerequisite: Graduate student status or 86 hours undergraduate credits completed.

**BIS 510 Network and Systems Security Fundamentals 3(3-0)**

Developing Skills needed to effectively and accurately analyze security risks related to networks and related systems, including issues of authenticity, confidentiality, integrity, and availability. This course may be offered in an online or hybrid format. Prerequisites: BIS 380 or CPS 565.

**BIS 512 Cybersecurity Analysis 3(3-0)**

Using behavioral analytics and tools to improve IT security. Configuring and using threat detection tools and performing data analysis. Prerequisites: BIS 380 or BIS 510 or CPS 333; 86 semester hours completed; or admission into the MSIS degree program.

**BIS 520 Teaching and Training at the Post-Secondary Level 3(3-0)**

Learning process, planning and delivering instruction and training, assessing learning, using technology, adult learners, and current research. Designed for collegiate-level business instructors or trainers. Prerequisites: BIS 350 or admission to the MSIS or MBA program or graduate standing.

**BIS 521 Governance, Risk, and Compliance in Cybersecurity 3(3-0)**

Investigating external and internal threats that compromise data and digitized intellectual property. Implementing effective policies for mitigating risks and security and remediation measures in organizations. This course may be offered in an online or hybrid format. Prerequisite: BIS 512.

**BIS 523 Cybercrime Forensics 3(3-0)**

Introduction to cybercrime and computer forensics. Exploring laws regulating electronic evidences along with establishing the basis for gathering electronic digital evidence and artifacts. This course may be offered in an online or hybrid format. Prerequisite: BIS 512.

**BIS 525 Managing Security and Privacy in the Cloud 3(3-0)**

Exploring cloud computing concepts, frameworks, and security/privacy issues related to cloud deployments. Evaluating relevant security approaches, security architecture, and cloud security policy and requirements. This course may be offered in an online or hybrid format. Prerequisite: BIS 512.

**BIS 530 Cybersecurity, Systems, and Network Certification 3(3-0)**

Building upon the ten security domains, uses the essential preparation tools and techniques to become a Certified Information Systems Security Professional. This course may be offered in an online or hybrid format. Prerequisite: BIS 512.

**BIS 531 Advanced Cybersecurity, Systems, and Network 3(3-0)**

A course in advanced cybersecurity topics covers the higher-level security domains typically used by experienced cybersecurity professionals. Uses preparation tools/techniques to become a CISSP. Prerequisite: BIS 530.

**BIS 535 System Administration Using SAP Basis 3(3-0)**

Tasks, tools, and transactions of the SAP system administrator are explained using hands-on exercises and step-by-step guides based on real-world examples. Prerequisites: BIS 347 and BUS 301 or BUS 331; or BIS 647 and BIS 638.

**BIS 580 Business Decision Modeling 3(3-0)**

This course offers an overview of the information systems and tools used for evidence-based business decision making. Prerequisites: STA 282QR or BUS 300QR or 503; 56 hours completed; admission to Professional Business Studies; or graduate standing.

**BIS 581 Business Data Analytics 3(3-0)**

This course offers an overview of the theories, workflows, and challenges of Business Data Analytics. Topics include data collection, cleansing, preparation, analysis, and visualization. Prerequisites: STA 282QR or BUS 300QR or BUS 503; 56 semester hours completed; admission to Professional Business Studies; or graduate standing.

**BIS 582 Data Visualization: Theory and Practice 3(3-0)**

This course will offer details on the theory and practice of data visualization. Students will learn visualization theory and design visualizations in accordance with human cognitive structure. Prerequisites: STA 282QR, or BUS 300QR, or BUS 503; 56 semester hours completed; admission to Professional Business Studies; or graduate standing.

**BIS 588 Business Analytics using GIS 3(3-0)**

Addresses concepts and methods in Business Analytics using Geographic Information Systems (BAGIS) and the application of GIS in business research, finance, marketing, logistics and decision-making. Prerequisites: BIS 255 or BIS 601 or MBA 610. Recommended: BIS 422 or BIS 638.

**BIS 597 Special Studies in Business Information Systems 1-12(Spec)**

Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. Prerequisites: See Course Search and Registration.

**BIS 598 Integration of Business Processes Using SAP Software 4(Spec)**

Examination of how ERP fundamental business processes interact using SAP software. This course may be offered in an online format. Prerequisites: A course supported by SAP software taken at CMU or permission of BIS Chairperson.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**BIS 601 Information Systems 3(3-0)****BIS 605 Communication in Professional Contexts 3(3-0)****BIS 619 Continuing Registration for Final Research Project 1(1-0)****BIS 625 Research in Information Systems 3(3-0)****BIS 627 Web Site Development 3(3-0)****BIS 628 Application Development 3(3-0)****BIS 630 Information Systems Process Management 3(3-0)****BIS 633 Business Intelligence/Analytics 3(3-0)****BIS 634 Seminar in Information Systems Issues 3(3-0)****BIS 635 Business Systems Applications 3(3-0)****BIS 636 Systems Analysis and Design 3(3-0)****BIS 638 Database Management for Business Systems 3(3-0)****BIS 647 Enterprise Systems for Management Using SAP Software 3(3-0)****BIS 656 Enterprise Analytics Using SAP Software 3(3-0)****BIS 657 ABAP Programming for ES 3(3-0)****BIS 658 Enterprise System Configuration Using SAP Software 3(3-0)****BIS 659 Enterprise Software Platform (SAP HANA) 3(3-0)****BIS 660 Managerial Communication 3(3-0)****BIS 688 Directed Work/Observation/Internship 1-6(Spec)****BIS 697 Special Studies in Business Information Systems 1-12(Spec)****BIS 698 Information Systems Project 3(3-0)****BIS 791 Independent Research 3(Spec)****BIS 798 Thesis 1-6(Spec)**

## BLR - Business Law and Regulation

See the Department of Finance and Law for more information.

**BLR 170 Legal Studies in Global Cultures 3(3-0)**

Study abroad of a culture and society outside of the Anglo-American tradition via study of that society's law in cultural, historical, and present day contexts. May be offered as Writing Intensive. Prerequisite: Permission of instructor. (University Program Group IV-B: Studies in Global Cultures)

**BLR 197 Special Topics 1-6(Spec)**

Special topics in legal studies.

**BLR 202 Legal Environment of Business 3(3-0)**

Introduction to the concept and use of law as a social institution. Open to both nonbusiness and business students. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**BLR 222 The Search for Racial Justice through Law 3(3-0)**

Chronicles and evaluates the use of law by racial minorities in America in the search for justice. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**BLR 235 Business Law 3(3-0)**

Introduction to law applicable to business transactions; case studies in torts, property, contracts, sales, agency, business organizations. Employment law. May be offered as Writing Intensive. This course may be offered in an online format. Prerequisites: BIS 101, Tier 1 Continuing Admission to Professional Business Studies.

**BLR 297 Special Topics 1-6(Spec)**

Experimental courses to cover material of special interest not covered in the regular curriculum.

**BLR 302 Law of Agreements 3(3-0)**

Topics include common law contracts, sales, commercial paper, secured transactions. Special emphasis upon the economic setting and modern development of the legal doctrines. Prerequisites: BLR 202 or BLR 235; 56 semester hours.

**BLR 310 Alternative Dispute Resolution in Business 3(3-0)**

Techniques of negotiation, mediation, and arbitration as compared to litigation are examined and illustrated with student participation. Legal research and writing skills emphasized. Prerequisite: BLR 202 or BLR 235.

**BLR 320 White Collar Crime and Other Criminal Law Concepts 3(3-0)**

Fundamentals of American criminal law with a focus on white collar crime. Prerequisite: 56 semester hours. Recommended: BLR 202 or 235.

**BLR 325 Women and the Law 3(3-0)**

Examines perceptions and behavior toward women and their struggle for change so as to achieve gender equality through the use of law. May be offered as Writing Intensive. Prerequisites: 56 credit hours. (University Program Group IV-A: Studies in Discrimination)

**BLR 327 Legal Research 3(3-0)**

Focuses on the importance of legal research as well as teaching methods of finding, analyzing, and evaluating the law. Open to both business and nonbusiness students. Prerequisites: BLR 202 or BLR 235; 56 semester hours.

**BLR 328 Employment Law and Discrimination 3(3-0)**

Survey of employment and work environment laws with focus on discrimination toward marginalized groups based on race, creed, ethnicity, disability, age, gender, sexual orientation, pregnancy. May be offered as Writing Intensive. Prerequisites: 56 semester hours. (University Program Group IV-A: Studies in Discrimination)

**BLR 330 Real Estate Law 3(3-0)**

The fundamentals of the law relating to land ownership and use, including possessory and non-possessory rights and interests in land. May be offered as Writing Intensive. Prerequisites: BLR 202 or BLR 235.

**BLR 337 Sports Law 3(3-0)**

This course identifies and applies various areas of law to the sport business including discrimination in sport with respect to race, gender, and disability. Prerequisites: BLR 202 or BLR 235.

**BLR 350 Law and Economics 3(3-0)**

Theory and application of analytical tools of law and of economics in an integrative approach to both subjects. Identical to ECO 350. Credit may not be earned in more than one of these courses. Prerequisites: BLR 202 or BLR 235, ECO 202 or ECO 203.

**BLR 365 Native American Justice Through Law 3(3-0)**

Examines the legal and historical foundations and current application of the law with respect to the Native American's struggle for recognition and autonomy. May be offered as Writing Intensive. Prerequisite: 56 credit hours. (University Program Group IV-C: Studies in Racism & Cultural Diversity in the United States)

**BLR 390 Law of Enterprise Organization 3(3-0)**

Survey of laws regulating the creation, operation, and termination of agencies, partnerships, and corporations. Prerequisites: BLR 202 or BLR 235; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BLR 397 Special Topics 1-3(Spec)**

Special topics in legal studies. Prerequisites: BLR 202 or BLR 235; 56 semester hours.

**BLR 410 Regulatory Law 3(3-0)**

Survey of major regulatory programs affecting business decision-making, including antitrust, securities regulation, labor-employment law, environmental-land use regulation, utility regulation, administrative law. Prerequisites: BLR 202 or BLR 235; 56 semester hours completed. Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**BLR 445 Personal Estate Planning 3(3-0)**

Fundamentals of estate planning for personal use and professional training. Professional topics target applications in trust administration, accounting, and personal financial planning. Identical to FIN 445. Credit may not be earned in more than one of these courses. Prerequisite: 56 semester hours completed. Recommended: BLR 202 or BLR 235 or ACC 311 or FIN 307.

**BLR 491 Independent Studies 1-6(Spec)**

Research and writing on a topic selected in consultation with an instructor. Prerequisites: 86 semester hours.

**BLR 521 Environmental Law and Policy 3(3-0)**

A survey of environmental laws and policies that affect business decision making, stressing macroenvironmental considerations and major Michigan environmental issues. Prerequisites: BLR 202 or BLR 235 or ENV 101 and completion of 86 hours or admission to graduate program.

**BLR 565 The International Legal Environment of Business 3(3-0)**

Examines global legal environments that affect business and international business relationships. Prerequisites: BLR 202 or BLR 235; 86 semester hours completed and admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor; or graduate status.

**BLR 597 Special Topics 1-6(Spec)**

This course covers material of special interest to undergraduates and not covered in the regular curriculum. Prerequisites: BLR 202 or BLR 235; undergraduate students at the senior level or graduate standing.

For graduate level course descriptions above 600, consult the current Graduate

*Studies Bulletin.*

**BLR 600 Legal and Social Environment of Business 3(3-0)**

**BLR 631 Public Policy and Regulated Industries 3(3-0)**

## BUS - Business

*See the College of Business Administration for more information.*

**BUS 100 Introduction to Business 3(3-0)**

Introduces students to business, exploring careers and developing professional skills such as decision making, analytics, and communication. This course may be offered in an online format.

**BUS 102 Teamwork in Business 1(1-0)**

Helps students develop teamwork skills in a business setting and orients students to campus programming and events focused on business. This course may be offered in an online format. Recommended: Taken together with BUS 100 in the same semester.

**BUS 109 Collegiate Success for Business Students 1(1-1)**

Fundamentals of collegiate success strategies for business students. A first year course in academic resources and career development. Prerequisite: Only open to students in the Business Residential College.

**BUS 202 Leading through Change 1(1-0)**

Students will complete self-assessments to identify their leadership style and learn how to lead through change. This course may be offered in an online format. Prerequisites: BUS 102 or BUS 109; 26 credit hours completed. Recommended: taken with MGT 258.

**BUS 300QR Applied Business Statistics 3(3-0)**

Applications of statistical analysis to support business decision making. Covers collection of business data, analysis of business datasets, and presentation of results. This course may be taught in an online format. Quantitative Reasoning. Prerequisites: STA 282 or 382; 26 hours completed.

**BUS 302 Career Management 1(1-0)**

Students will learn how to build their professional network, conduct job searches, negotiate salaries, plan for career success, and prepare for potential career challenges. This course may be offered in an online format. Prerequisites: BUS 202; 56 credit hours.

**BUS 321 Spreadsheet-Based Data Analysis for Business 3(3-0)**

The course provides an in-depth examination of spreadsheets and their use in business analytics. Students gain analytical skills necessary to address a wide variety of business problems. This course may be offered in an online format. Credit may not be earned in both BIS 323 and BUS 321. Prerequisites: BIS 255; Admission to BSBA Degree. Co-requisites: MKT 301 and MGT 311/ MKT 311.

**BUS 331 Integrated Business Experience 3(2-1)**

Enterprise Resource Planning (ERP) applications emphasizing functional integration of business activities. An integrated business simulation experience linking management decisions across organizations. This course may be offered in an online format. Prerequisites: ACC 255 or ACC 202; Admission to BSBA Degree; Pre/Co-requisite: MKT 304 or MKT 301.

**BUS 351QR Applied Business Analytics 3(3-0)**

Applications of statistical analysis to support business decision making. Covers collection of business data, analysis of business datasets, and presentation of results. This course may be offered in an online format. Quantitative Reasoning. Prerequisites: STA 282QR or STA 382QR; BIS 255; BUS 321.

**BUS 501 Project Management Fundamentals 3(3-0)**

Covers foundational terms, concepts, and processes of project management, providing an opportunity to apply key elements of project management to a simulated project. This course may be offered in an online or hybrid format. Prerequisite: Graduate student status or 86 hours undergraduate credits completed.

**BUS 503QR Applied Lean Six Sigma 3(3-0)**

This course applies principles and practices of Lean Six Sigma (LSS) and other operations improvements that have been demonstrated to bring value to business. LSS builds on a business statistics foundation. This course may be offered in an online format. Quantitative Reasoning. Prerequisites: STA 282 or 382 and 56 semester hours completed; or graduate school admission.

**BUS 505 Application of Project Management Principles 3(3-0)**

Building on fundamentals, students analyze and apply project organization, staffing, and behavioral and qualitative skills in a simulated project to develop core project management competencies. This course may be offered in an online or hybrid format. Prerequisite: BUS 501.

**BUS 507 Advanced Project Management Methodologies 3(3-0)**

Evaluate and create project management solutions appropriate for projects/programs through the complete life cycle, using key processes and knowledge areas of project management. This course may be offered in an online or hybrid format. Prerequisite: BUS 505.

**BUS 597 Special Topics in Business Administration 1-9(Spec)**

Selected topics in business administration that are not included in existing courses. Repeatable up to 9 hours when content does not duplicate previous topics. This course may be offered in an online format. Prerequisites: 86 semester hours completed; STA 282 or 382; MTH 107 or 132 or 217; or Graduate Standing.

*For graduate level course descriptions above 600, consult the current Graduate*

*Studies Bulletin.*

**BUS 619 Voice of the Customer 3(3-0)**

**BUS 629 Corporate Governance and Social Responsibility 3(3-0)**

**BUS 639 Process Improvement 3(3-0)**

**BUS 691 Management Consulting: Client Relations 2(2-0)**

**BUS 692 Management Consulting: Diagnosis 2(2-0)**

**BUS 693 Management Consulting: Measurement 2(2-0)**

**BUS 694 Management Consulting: Implementation 2(2-0)**

**BUS 697 Special Topics in Business 1-12(Spec)**

**BUS 698 Integration of Business Processes for Management using SAP Software 4(Spec)**

## CDE - Planned Experience

**CDE 291 Planned Experience in Community Development 1-15(Spec)**

**CDE 491 Planned Experience in Community Development 1-15(Spec)**

## CED - Counselor Education and Personal Development

*See the Department of Counseling, Educational Leadership, and Higher Education for more information.*

**CED 101 Career and Self-Exploration 1(1-0)**

This course prepares students with self-awareness, career awareness, and academic awareness skills leading to career development. This course may be offered in an online format.

**CED 502 Student Development in Higher Education 3(3-1)**

The college student personnel movement, its social, psychological, and cultural foundations. Student development functions; career program models; legal, ethical, and professional considerations; role of professionals. This course is approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

**CED 505 Orientation to the Counseling Profession 1(1-0)**

Orient students to the profession by examining history, identity, and process of becoming a professional counselor in a diverse society. This course is approved for offering in a distance learning format. Prerequisites: Senior standing or graduate status.

**CED 520 Personal Growth and Development 2(Spec)**

Personal growth group to help participants increase awareness and acceptance of self and others. Prerequisites: Junior standing or graduate status.

**CED 555 Human Relations Skills 3(3-0)**

An introduction to the theories, skills, and models utilized in developing helping relationships in organizations. Identical to MSA 555. Credit may not be earned in more than one of these courses. This course may be offered in an online format. Prerequisite: Senior standing or graduate status.

**CED 580 Seminar: Professional Topics 1-12(Spec)**

Special topics that are germane to the field of counseling. This course is approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

**CED 595 Play Therapy for Counselors 3(3-0)**

Building a counseling relationship with children by utilizing play media to facilitate expression, selfunderstanding, and personal growth and development. Prerequisites: Junior Level Standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**CED 603 Introduction to Clinical Mental Health Counseling 3(3-0)**

**CED 604 Introduction to School Counseling 3(3-0)**

**CED 605 Introduction to Couple and Family Counseling 3(3-0)**

**CED 608 Clinical Skills in Couple and Family Counseling 3(3-0)**

**CED 610 Career Counseling 3(3-0)**

**CED 611 Developmental Career Counseling 3(2-1)**

**CED 612 Work and Career in a Global Society 3(3-0)**

**CED 615 Postsecondary Planning for School Counselors 3(3-0)**

**CED 616 Basic Group Participation 1(Spec)**

**CED 617 The Counseling Supervisor 3(3-0)**

**CED 619 Continuing Registration for Final Research Project 1(1-0)**

**CED 620 Introduction to Multicultural Issues in Counseling 3(3-0)**

**CED 621 Orientation to a Culturally Diverse Society 3(3-0)**

**CED 625 Cross-Cultural Service Learning for Counselors 3(Spec)**

**CED 630 Professional Orientation and Ethics 3(3-0)**

**CED 640 Assessment in Counseling 3(3-0)**

**CED 641 Introduction to Counseling for Addictions 3(3-0)**

**CED 642 Neuropsychopharmacology 3(3-0)**

**CED 643 Etiology of Addiction 3(3-0)**

**CED 644 Addiction Oriented Systems and Methods of Care 3(3-0)**

**CED 645 School Counseling Seminar 3(3-0)**



**CED 646 Internship in Addiction Counseling 3(Spec)**  
**CED 650 Theories and Techniques of Group Counseling 3(3-0)**  
**CED 651 Counseling Children and Adolescents 3(3-0)**  
**CED 660 Counseling Techniques 3(3-0)**  
**CED 665 Personal and Professional Development Across the Lifespan 3(3-0)**  
**CED 668 Family Counseling and Therapy 3(3-0)**  
**CED 670 Independent Study 1-12(Spec)**  
**CED 677 Counseling Theories 3(3-0)**  
**CED 679 Crisis and Trauma Counseling 3(3-0)**  
**CED 680 Seminar: Professional Topics 1-12(Spec)**  
**CED 683 Sexuality Counseling and Therapy Techniques 3(3-0)**  
**CED 684 Grief and Loss Counseling 3(3-0)**  
**CED 685 Counseling Aspects of Grief and Loss 3(3-0)**  
**CED 686 Psychopathology in Counseling 3(3-0)**  
**CED 690 Counseling Practicum 3(Spec)**  
**CED 691 Internship 1-6(Spec)**  
**CED 695 Research in Counseling 3(3-0)**  
**CED 696 Independent Research 3(Spec)**  
**CED 698 Thesis 1-6(Spec)**  
**CED 699 Diagnosis and Treatment Planning in Counseling 3(3-0)**  
**CED 750 Advanced Group Facilitation 3(3-1)**  
**CED 751 Facilitation of Play Therapy Sessions 3(3-1)**  
**CED 780 Seminar: Professional Topics 1-12(Spec)**  
**CED 790 Advanced Counseling Practicum 3(1-3)**  
**CED 791 Advanced Internship in Counseling 3(Spec)**

## CGL - Cultural and Global Studies

For more information, contact the College of Liberal Arts and Social Sciences.

**CGL 145 Racism and Racial Justice through Dialogue 3(3-0)**  
*Interdisciplinary course that examines (through lecture and dialogue) historical and economic causes of racism and ways of achieving a just society. Identical to IGR 145. Credit may not be earned in more than one of these courses. (University Program IV-C: Studies in Racism and Cultural Diversity in the United States)*  
**CGL 200 Short-term Study Abroad 1-3(Spec)**  
*A short-term faculty-led study abroad experience, to be used within relevant and appropriate CGL curricula. Prerequisite: Signed CGL certificate.*  
**CGL 201 Introduction to Global Citizenship Study Abroad 3(3-0)**  
*Short-term faculty-led study abroad experience, with pre-trip coursework focused on global citizenship. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*  
**CGL 285 Language and Foreign Accent Discrimination 3(3-0)**  
*Explores discrimination due to a foreign accent as suffered by Hispanics in the U.S. and by other groups within Latin America. Taught in English. Identical to SPN 285. Credit may not be earned in more than one of these courses. This course may be offered in an online format. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)*  
**CGL 300 Study Abroad Experience 1-6(Spec)**  
*Study abroad experience, to be used within relevant and appropriate CGL curricula. Prerequisites: Signed CGL certificate; 3 hours completed of that certificate. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*  
**CGL 301 Global Studies Experience in the U.S. 3(3-0)**  
*Faculty-led experience within the United States with diverse cultures, to be used within relevant and appropriate CGL curricula. Prerequisites: Signed CGL certificate; 3 hours completed of that certificate.*  
**CGL 302 Cultural and Global Studies Internship 1-3(Spec)**  
*Internship experience within or outside of the United States to complement the Cultural and Global Studies Major, Minor or Certificate being completed. Identical to IGR 365. Credit may not be earned in more than one of these courses. Prerequisites: Signed CGL Major, CGL Minor, or CGL certificate; 3 hours of curriculum completed; permission of a CGL faculty advisor.*  
**CGL 305 Special Topics in Cultural and Global Studies 1-6(Spec)**  
*Course covers special topics of interest to Cultural and Global Studies not covered in existing courses.*  
**CGL 350 Latino Culture in the U.S. 3(3-0)**  
*This course discusses broader issues of identity, opportunity, inequality, race, ethnicity and discrimination in U.S. Latino Culture. This course may be offered in an online format. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)*  
**CGL 351 Living in America: Social Structures in Latino Culture 3(3-0)**  
*A study of the ways Latino culture has integrated itself within the stratification, social structures and social policy of the US society. This course may be offered in an online format. (University Program Group III-B: Studies in Social Structures)*

## CGL 353 Contested Boundaries: The US-Mexico Border 3(3-0)

*An examination of the historical development and contemporary cultural, economic and political issues concerning the US-Mexico border and US Southwest. Identical to ANT 353. Credit may not be earned in more than one of these courses. (University Program Group III-B: Studies in Social Structures)*

## CGL 445 Training in Intergroup Dialogue Facilitation 3(3-0)

*This course gives students a foundation in the skills and knowledge needed to facilitate dialogue in small diverse groups on topics related to discrimination. Identical to IGR 445. Credit may not be earned in more than one of these courses. Prerequisites: IGR 145 or CGL 145.*

## CGL 496WI Seminar in Cultural and Global Studies 3(3-0)

*An interdisciplinary capstone seminar in Cultural and Global Studies integrating themes in current research and practice, focusing on global movements, cultural institutions, and current issues. Writing Intensive. Prerequisites: ANT 170 or GEO 121. Minors must have completed at least 12 hours of additional course work for the program. Majors must have completed at least 21 hours of additional course work.*

## CGL 499 Cultural and Global Studies Portfolio Workshop 1(1-0)

*Capstone workshop to develop a portfolio of work within CGL stand-alone certificate programs to develop students' synthetic reflection on certificate coursework. Pre/Co-requisites: Signed CGL certificate; 12 hours completed in appropriate certificate program.*

## CGL 505 Advanced Cultural and Global Studies Topics 1-6(Spec)

*Course covers advanced special topics of interest to Cultural and Global Studies not covered in existing courses. Prerequisite: Graduate standing or completion of 56 undergraduate credit hours.*

## CHM - Chemistry

See the Department of Chemistry and Biochemistry for more information.

## CHM 101 Armchair Chemistry 3(2-2)

*An introduction to the science of chemistry, using equivalent portions of laboratory experiments and directed discussions. No credit toward chemistry or biochemistry major or minor. Satisfies University Program Group II laboratory requirement. (University Program Group II-B: Quantitative and Mathematical Sciences)*

## CHM 111 The Interaction of Chemistry and Society 3(3-0)

*The impact of chemistry on our environment. Emphasis on water, air, and environmental pollution. Recommended for elementary school teachers. No credit toward chemistry or biochemistry major or minor. No previous chemistry required.*

## CHM 112 Chemistry and Society Laboratory 1(0-3)

*Elementary laboratory experiments which parallel CHM 111 and 120 lectures and investigate the impact of chemistry on our environment. Recommended for elementary/middle school education majors. No credit toward chemistry or biochemistry major or minor. Satisfies University Program Group II laboratory requirement. This course may be offered in an online or hybrid format. Pre/Co-requisite: CHM 111 or CHM 120. (University Program Group II-B: Quantitative and Mathematical Sciences)*

## CHM 120 Survey of Chemistry 4(4-0)

*Elementary concepts in chemistry. For students on curricula needing minimal chemical background or students who need additional preparation for CHM 131. This course provides suitable preparation for the successful completion of the laboratory courses, CHM 112 or CHM 127. Cannot be counted on a Chemistry/Biochemistry major or Chemistry minor. Recommended: MTH 105 or placement. (University Program II-B: Quantitative and Mathematical Science)*

## CHM 127 Introductory Chemistry Laboratory 1(0-2)

*Elementary laboratory experiments which parallel the syllabus in CHM 120. Recommended for students in dietetics, sports medicine, health education, and elementary/middle school education. Satisfies University Program Group II laboratory requirement. No credit toward chemistry or biochemistry major or minor. Pre/Corequisite: CHM 120. (University Program Group II-B: Quantitative and Mathematical Sciences)*

## CHM 131 General Chemistry I 4(3-3)

*Introductory course covering fundamental concepts of chemistry including atoms, properties of matter, reactions and stoichiometry, electronic structure, chemical bonding, molecular structure, thermochemistry, gas laws. Satisfies University Program Group II laboratory requirement. Recommended: MTH 107 or placement; high school chemistry or CHM 120. (University Program Group II-B: Quantitative and Mathematical Sciences)*

## CHM 132 General Chemistry II 4(3-3)

*Continuation of CHM 131 including solutions, kinetics, equilibrium, weak acids and bases, thermodynamics, and electrochemistry. Prerequisite: CHM 131. Recommended: a grade of C or better in CHM 131.*

## CHM 141 General Chemistry for Engineering Students 4(4-0)

*Advanced introductory course covering fundamental concepts of chemistry including stoichiometry, equilibrium, and kinetics. At least one year of high school chemistry is expected. Recommended: MTH 107 or placement; high school chemistry or CHM 120.*



**CHM 142 Introduction to Chemistry Lab 1(0-3)**

Fundamental concepts of chemistry including stoichiometry, thermochemistry, and molecular structures, solutions, kinetics, equilibrium, weak acids and bases, and electrochemistry. Pre/Co-requisites: CHM 141. Recommended: High school algebra or MTH 107; high school chemistry or CHM 120.

**CHM 161 Principles of Chemistry 5(4-4)**

Intensive introduction to chemical principles for the well-prepared, motivated student. Recommended: High school Algebra II or MTH 107 (preferably with a B or better); high school chemistry or CHM 120.

**CHM 171 Perspectives in Chemistry 1-6(Spec)**

Selected topics in chemistry for the nonscientist. May be repeated for a total of 6 credits when the content is not a duplication of previous topics. No credit toward major or minor.

**CHM 172 Introduction to the Techniques of Research 1-3(Spec)**

Introduction to laboratory techniques used in research for beginning students in chemistry and for participants in other summer research programs at the beginning level.

**CHM 211QR Quantitative Analysis 4(2-6)**

Analysis and interpretation of quantitative chemical information from volumetric, electrochemical, spectroscopic, and chromatographic techniques. Quantitative Reasoning. Prerequisite: CHM 132. Recommended: MTH 107.

**CHM 265QR Chemical Physical Science for Elementary Teachers 2(1-3)**

Physical science with an emphasis on chemical concepts for elementary teachers. Chemical reactivity and atomic structure principles are explored in a contextual format. May not be applied to Chemistry or Biochemistry majors or minor. Quantitative Reasoning. Prerequisite: MTH 152 or MTH 150 with C- or better.

**CHM 331 Inorganic Chemistry 3(2-4)**

Descriptive chemistry of selected main group and transition elements, coordination complexes, structures and properties of solids. Synthesis and characterization of inorganic compounds. Prerequisite: CHM 132.

**CHM 333 Bioinorganic Chemistry 3(3-0)**

Introduction to the function of metals and inorganic ions in living systems. Metal ion transport, storage, biomineralization, and processes of metalloproteins are examined. Prerequisite: CHM 132. Recommended: CHM 346 or CHM 347 or CHM 348.

**CHM 342 Survey of Organic Chemistry 4(3-3)**

Elementary course covering the field of organic chemistry. Course meets the needs for entrance to some professional schools. No credit toward chemistry major or minor. Prerequisites: One of: CHM 120, CHM 127, or CHM 132 or CHM 161.

**CHM 343 Organic Chemistry I: Foundations 4(4-0)**

Foundational course in organic chemistry. Designed to support in-depth coursework in both organic chemistry and bioorganic/biochemistry. Prerequisite: CHM 132.

**CHM 345 Organic Chemistry I 3(3-0)**

Overview of common organic reactions. Reactions of alkanes, alkenes, alkynes, and alkyl halides, Ultraviolet/Visible, Infrared, and Nuclear Magnetic Resonance spectroscopy, mass spectrometry. Prerequisite: CHM 132.

**CHM 346 Organic Chemistry II: Synthesis and Bioorganic Chemistry 3(3-0)**

Continuation of CHM 345. Overview of reactions of aromatic compounds, alcohols/thiols, ethers/sulfides, amines, and carbonyl compounds applied to synthetic chemistry and biological chemistry. Prerequisite: CHM 345.

**CHM 347 Organic Chemistry II: Mechanisms and Synthesis 2(2-0)**

This course applies and expands upon the foundational concepts of organic chemistry, emphasizing reaction mechanisms and synthesis of organic molecules. For chemistry and other physical sciences majors. Prerequisite: CHM 343.

**CHM 348 Organic Chemistry II: Bioorganic 2(2-0)**

This course applies and expands upon the foundational concepts of organic chemistry in a biological context. For biochemistry, pharmacy, pre-health professional, and biology students. Prerequisites: CHM 343.

**CHM 349 Organic Chemistry Laboratory 2(0-6)**

Laboratory techniques in organic chemistry; methods of synthesis, separation, purification, structure determination - spectroscopic methods; utilization of electronic database (Scifinder) searching techniques. Prerequisite: CHM 343; or CHM 345 and Pre/Co-requisite: CHM 346.

**CHM 350WI Water as Life, Death, and Power 3(3-0)**

*Problems of water access, water-borne pathogens, water treatment, and power relationships in global cultures from anthropology, biology, and chemistry perspectives. Identical to ANT 350WI and BIO 350WI. Credit may not be earned in more than one of these courses. May not be applied to any Biology major or the Biology minor. May not be applied to Chemistry or Biochemistry major or minor. Writing Intensive. Prerequisites: Completion of 56 hours. Recommended: ANT 171 or 170; BIO 101 or 110 or 111; CHM 111 or 120 or 131. (University Program Group III-B: Studies in Social Structures)*

**CHM 351 Physical Chemistry I 3(3-0)**

Fundamental principles of chemistry based on a quantitative approach. Classical thermodynamics of gases and solutions, chemical equilibria, and electrochemistry. Prerequisites: CHM 211; PHY 146; Pre/Co-requisite: MTH 233.

**CHM 352 Physical Chemistry II 3(3-0)**

Fundamental principles of chemistry based on a quantitative approach. Quantum mechanics, spectroscopy, and kinetics. Prerequisite: CHM 351; MTH 233.

**CHM 353 Physical Chemistry 5(5-0)**

This course provides theoretical foundation in thermodynamics, quantum chemistry, spectroscopy, and chemical kinetics. Prerequisites: CHM 211; MTH 133; PHY 146.

**CHM 355 Physical Chemistry: Foundations of Physical and Biophysical Chemistry 3(3-0)**

Application of physical theories to the understanding of energetics, kinetics, and spectra of biochemically relevant structures and reactions. Prerequisites: CHM 211; MTH 133; Pre/Co-Requisite: PHY 131 or PHY 146.

**CHM 356 Quantum Chemistry and Statistical Thermodynamics 3(3-0)**

This course provides advanced knowledge of Quantum Chemistry and Molecular Spectroscopy, as well as an introduction to Statistical Thermodynamics. Prerequisites: CHM 355; MTH 133.

**CHM 357 Physical Chemistry Laboratory 2(0-4)**

Laboratory techniques with advanced data analysis and error propagation in thermochemistry, phase equilibria, kinetics, spectroscopy, surface effects and computational chemistry. Prerequisite: PHY 176. Pre/Co-requisite: CHM 352 or 353.

**CHM 371 Special Topics in Chemistry 1-6(Spec)**

Special topics in chemistry presented at an undergraduate level. Course may be taken for credit more than once as long as course content is not duplicated; total credit not to exceed 6 hours. Prerequisites: CHM 132.

**CHM 421 Introductory Biochemistry for Health Sciences 3(3-0)**

Introductory one-semester Biochemistry course with a focus on the human body. No credit toward Chemistry/Biochemistry major or Chemistry minor. Prerequisites: CHM 342 or CHM 346 or CHM 343. Recommended: BIO 151 or HSC 211.

**CHM 475 Internship in Chemistry or Biochemistry 1-6(Spec)**

A full-time or part-time work experience for one or more semesters dealing with aspects of Chemistry or Biochemistry. This course may be offered in an online format. Prerequisites: Permission of department chairperson or major advisor; 56 semester hours completed; a signed Chemistry or Biochemistry major.

**CHM 491WI Undergraduate Capstone Research and Thesis 1-3(Spec)**

Culminating experience for chemistry/biochemistry majors: independent research; capstone thesis. Development of critical thinking, laboratory skills, instrumentation competence, scientific reasoning, and communication skills. Writing intensive. Prerequisites: 8 credits of chemistry courses and permission of instructor.

**CHM 505 Teaching Chemistry and Physics in Secondary Schools 3(3-0)**

This course exposes pre-service secondary chemistry and physics teachers to theory and practice of teaching in secondary schools, design of instructional units, and safety practices. Must be completed prior to student teaching. Identical to PHY 505. Credit may not be earned in more than one of these courses. Prerequisites: CHM 132; PHY 131 or 146; admission into the Teacher Education Program; signed major or minor in chemistry or physics (secondary education); Junior or Senior standing. Graduate students must be enrolled in a teaching master's program.

**CHM 507 Field Experience in Teaching Chemistry/Physics 1(Spec)**

Supervised experience in high school chemistry and/or physics classes. Identical to PHY 507. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: admission into the Teacher Education Program; Junior or Senior standing. Graduate students must be enrolled in a teaching master's program. Pre/Co-requisite: CHM 505 or PHY 505.

**CHM 509 Environmental Chemistry for Science Teachers 4(3-3)**

For science teachers and prospective teachers of grades 4-12. Emphasis on environmental chemistry concepts and laboratory/field activity development for use in middle and high school. This course may be offered in an online or hybrid format. Prerequisites: 8 credit hours of college level Chemistry; 6 credit hours of education coursework; Senior or Graduate standing; admission to Teacher Education Program or valid teaching certificate. Recommended: College level Organic Chemistry and a Teaching Methods course.

**CHM 511 Advanced Analytical Chemistry 4(1-6)**

Qualitative and quantitative analysis using analytical sampling, method development, separation, instrumentation, and statistics to solve chemical problems and communicate the results. Prerequisite: CHM 211; or graduate standing. Recommended: CHM 352 or CHM 353 or CHM 355.

**CHM 514 Environmental Chemistry 3(3-0)**

This course applies analytical chemistry to understand the fate of chemicals in the environment and green chemistry processes. Prerequisites: CHM 211; CHM 343 or CHM 346. Pre/Co-requisites: CHM 351 or CHM 353 or CHM 355.

**CHM 515 Environmental Chemistry of the Great Lakes 2(1-3)**

This hands-on field and laboratory course applies analytical chemistry to analyze air, water, and soil samples collected from Michigan freshwater ecosystems. Prerequisites: CHM 211, CHM 514 or ENS 323 or BIO 213; or graduate standing.

**CHM 520 Introductory Biochemistry 3(3-0)**

Structure, function, and metabolism of proteins, carbohydrates, lipids, and nucleic acids. Prerequisite: CHM 346 or CHM 343 or admission to Chemistry MS or BCMB program.

**CHM 521 Biochemistry I 3(3-0)**

Structure and function of nucleic acids, proteins, lipids and membranes, and carbohydrates; enzyme kinetics and catalysis; glucose metabolism. Prerequisites: CHM 346 or CHM 347 or CHM 348.

**CHM 522 Biochemistry II 3(3-0)**

Continuation of CHM 521. Metabolism of fatty acids, amino acids, and nucleotides. Biochemical mechanisms of DNA replication, transcription, translation, gene regulation, and cell signaling. Prerequisite: CHM 521.

**CHM 527 Biochemistry Laboratory 2(1-3)**

Isolation, characterization, and analysis of proteins and other biomolecules using chromatographic, electrophoretic, spectroscopic, and advanced analytical techniques. Prerequisites: CHM 211, CHM 349; or graduate standing. Pre-/Co-requisites: CHM 520 or CHM 521.

**CHM 528 Bioanalytical Techniques Laboratory 2(1-3)**

Practical and theoretical aspects associated with the laboratory analysis of macromolecules (proteins and nanomolecules). Prerequisites: CHM 211 or graduate standing. Pre-/Co-requisites: CHM 520 or CHM 521.

**CHM 531 Advanced Inorganic Chemistry 3(3-0)**

Molecular structure and symmetry, acid-base and oxidation-reduction chemistry, reactivity of inorganic compounds from a thermodynamical basis, catalysis, solid state and organometallic compounds. Prerequisites: CHM 331 or graduate standing. Recommended: CHM 352 or CHM 353.

**CHM 541 Advanced Organic Chemistry: Mechanisms 3(3-0)**

Mechanisms of organic reactions, emphasizing methods by which these are determined including kinetics, principles of bonding and stereochemistry in depth. Pre-requisites: CHM 346 or CHM 347 or CHM 348 or graduate standing.

**CHM 542 Structure Determination Using Spectroscopic and Related Methods 3(3-0)**

Utilization of spectroscopic and related methods (UV, IR, MS, 1D and 2D NMR, other) for the determination of molecular structure. Prerequisite: CHM 343 or CHM 345 or graduate standing.

**CHM 547 Advanced Synthesis Laboratory 2(1-3)**

Advanced synthesis, separation, and structure determination of organic and inorganic compounds. Prerequisite: CHM 349, CHM 331.

**CHM 551 Materials Chemistry 3(3-0)**

This course will provide a detailed survey of metals, semiconductors, ceramics, and nanomaterials, with a special emphasis on structure-property relationships. Students cannot receive credit for both SAM 700 and CHM 551. Prerequisite: CHM 331 or graduate status. Recommended: CHM 346 or CHM 347 or CHM 348.

**CHM 555 Advanced Physical Chemistry 3(3-0)**

Advanced development and application of physical theories using a statistical mechanics approach to understanding of molecular energetics and kinetics. Prerequisites: CHM 352 or CHM 353 or CHM 355; MTH 133; or graduate standing.

**CHM 556 Applied Quantum Chemistry 3(3-0)**

This course provides in-depth quantum theory and its applications to understanding the properties of atoms and molecules. Prerequisites: CHM 353 or graduate standing in Chemistry.

**CHM 560 Biomimetic Nanotechnology 3(3-0)**

Introduction to biomimetic nanotechnology. Biological molecules responsible for a human sense or movement are presented and their application in artificial systems is discussed. Prerequisites: CHM 343 or CHM 346 or graduate standing in a CSE program.

**CHM 561 Polymer Chemistry 3(3-0)**

An introductory course on polymer synthesis, polymer theory, and basic characterization techniques. Prerequisites: CHM 346 or CHM 347 or CHM 348; CHM 352 or CHM 353.

**CHM 562 Industrial Chemistry 3(3-0)**

Treatment of the following three primary areas: 1) actual chemistry of industry, 2) the technology of industry, and 3) the industrial chemical environment. Prerequisite: CHM 346 or CHM 347 or CHM 348 or acceptance into the Chemistry MS program.

**CHM 566 Introduction to Biomaterials 3(3-0)**

Introduction to biomaterials science, including materials properties, interactions between materials and living tissues, and materials and biological testing. Prerequisites: CHM 346 or CHM 343 or graduate standing. Recommended: CHM 352 or CHM 353 or CHM 355; CHM 520 or CHM 521; CHM 561; BIO 105QR.

**CHM 567 Polymer Science Laboratory 2(1-3)**

Treatment of laboratory techniques common to polymer science: synthesis of polymers and the characterization of these materials by spectroscopic, thermal, and mechanical methods. Prerequisites: CHM 349. Co-requisite: CHM 561.

**CHM 568 Pharmaceutical Chemistry 3(3-0)**

Interdisciplinary introduction to the science of drug formulation, delivery and efficacy. Prerequisite: CHM 346 or CHM 343 or CHM 342 or graduate standing. Recommended: CHM 520 or CHM 521; CHM 355 or CHM 353; BIO 392.

**CHM 569 Materials Characterization 2(1-3)**

Introduction to materials characterization; Characterization methods for polymeric, inorganic, and nanomaterials. Prerequisites: CHM 331; CHM 346 or CHM 347 or CHM 348; or graduate standing.

**CHM 571 Topics in Chemistry 1-9(Spec)**

Special topics in chemistry presented at an advanced undergraduate - beginning graduate level. Course may be taken for credit more than once; total credit not to exceed nine hours. Prerequisites: See Course Search and Registration.

**CHM 572 Selected Topics in Chemistry 1-9(Spec)**

Special topics in chemistry, presented in short course or workshop format. Course may be taken for credit more than once; total credit not to exceed nine hours. CR/NC only. Prerequisites: Senior level undergraduate or graduate standing in chemistry or biochemistry programs.

**CHM 583 Seminar in Chemistry 1-2(Spec)**

Presentation of technical material and training in the use of chemical literature. Prerequisites: 25 credit hours of chemistry courses or graduate standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**CHM 601 Chemistry Seminar Presentations 2(2-0)****CHM 602 Scientific Writing in Chemistry 1(1-0)****CHM 611 Advanced Topics in Analytical Chemistry 1-9(Spec)****CHM 612 Techniques in Nuclear Magnetic Resonance Spectroscopy 3(2-3)****CHM 619 Continuing Registration for Final Research Project 1(1-0)****CHM 621 Advanced Biochemistry 3(3-0)****CHM 624 Advanced Topics in Biochemistry 1-9(Spec)****CHM 631 Coordination Chemistry 3(3-0)****CHM 632 Advanced Topics in Inorganic Chemistry 1-9(Spec)****CHM 641 Advanced Topics in Organic Chemistry 1-9(Spec)****CHM 644 Advanced Organic Chemistry: Reactions and Synthesis 3(3-0)****CHM 651 Advanced Topics in Physical Chemistry 1-9(Spec)****CHM 655 Quantum and Computational Chemistry 3(3-0)****CHM 663 Polymer Synthesis 3(3-0)****CHM 665 Advanced Topics in Polymer Chemistry 1-9(Spec)****CHM 667 Polymer Additives 3(3-0)****CHM 669 Polymer Processing 3(3-0)****CHM 698 Plan B Project 1(Spec)****CHM 781 Chemistry Teaching Practicum 2(Spec)****CHM 791 Directed Research 1-6(Spec)****CHM 793 Chemistry Teaching Internship 1-9(Spec)****CHM 794 Experimentation in the Teaching of Chemistry 1-6(Spec)****CHM 798 Thesis 1-9(Spec)****CHN - Chinese**

*See the Department of History, World Languages, and Cultures for more information.*

**CHN 101 Elementary Chinese I 4(4-0)**

*Designed for students who have had no Chinese. Basic Mandarin Chinese language skills and introduction to the cultures of China. Students who have had one year of Chinese study may not enroll without permission of instructor. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**CHN 102 Elementary Chinese II 4(4-0)**

*Continuation of CHN 101. Basic Mandarin Chinese language skills and introduction to the cultures of China. Recommended: CHN 101. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**CHN 201 Intermediate Chinese 4(4-0)**

*Further development of Chinese language skills in reading, writing, listening and speaking, focusing on communicative competence. Organized by topics in everyday life. Recommended: CHN 102. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**COM - Communication**

*See the Department of Communication, Journalism, and Media for more information.*

**COM 101 Introduction to Communication 3(3-0)**

General education approach to theory and process of human communication with practicum opportunities. Satisfies Oral English Competency.

**COM 103 Oral Communication in the Online Environment 3(3-0)**

General education approach to theory and process of human communication, especially communication tailored for electronic media. Satisfies Oral English Competency.

**COM 195 Intercultural Communication 3(3-0)**

Content focuses on how values, attitudes and beliefs influence communication among people from different cultural backgrounds.

**COM 223 Deception and Lying 3(3-0)**

This course explores the complexities of deception within different contexts; focusing on the various forms of deceptive communication, motivations to deceive, and deception detection.

**COM 225 Introduction to Communication in Virtual Environments 3(3-0)**

This course addresses the implications of communicating in virtual worlds. Concepts to be addressed include: identity construction, online relationships, collaborative work environments, and ethics.

**COM 251 Foundations of Communication Theory 3(3-0)**

Basic theories pertaining to spoken symbolic interaction, focusing mainly on the psychological and sociological aspects of interpersonal communication and public address.

**COM 255 Special Topics in Communication 1-6(Spec)**

Varied topics of current interest; course is repeatable for up to 6 hours when content previously studied is not duplicated.

**COM 261 Communicating for Happiness and Wellness 3(3-0)**

*This class introduces students to the communication behaviors that lead to happier and more fulfilling lives and offers students opportunities to practice those techniques. (University Program Group III-A: Behavioral Sciences)*

**COM 264 Communicating in Workplaces 3(3-0)**

*Current communication theories and practices in the modern formal organization. Especially recommended for students on preprofessional curricula. (University Program III-A: Behavioral Sciences)*

**COM 267 Introduction to Debate 3(3-0)**

Prepares students without experience to gain understanding of theory and practice of debate. Satisfies Oral English Competency. Recommended for prelaw, prebusiness, urban government students, and teachers.

**COM 269 Practicum in Debate/Forensics 2-8(Spec)**

Opportunities for intensive research on topics in debate and various forms of forensics for students in the University forensics program. Satisfies Oral English Competency. Prerequisite: permission of instructor.

**COM 277 Video Games and Human Communication 3(3-0)**

Video Games and Communication is an introduction to key issues related to contemporary digital game studies. May be offered as Writing Intensive.

**COM 301WI Survey of Research in Communication 3(3-0)**

An introduction to the research and its methodologies in speech communication. Students will read and write about primary research in the discipline. Writing Intensive. Prerequisite: a grade of C (2.0) or better in COM 251.

**COM 309 Mediated Communication and Global Identity 3(3-0)**

*Analysis of American and International media to identify assumptions about global citizenship and how global citizenship relates to issues such as race/ethnicity and identity. Identical to BCA 309. Credit may not be earned in more than one of these courses. Prerequisites: A minimum of 12 completed credit hours. Because the course involves international travel, all students must apply through the Office of International Education. Recommended: A minimum of 56 completed credit hours. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**COM 352WI Communication and Social Influence 3(3-0)**

This course explores how language and public speeches shape decisions, create political support, define presidential leadership, repair public images, and celebrate community values. Writing Intensive.

**COM 353 Small Group Communication 3(3-0)**

Theories and application of the methods surrounding small-group interaction processes.

**COM 357 Public Speaking 3(3-0)**

Theories and techniques for creating public speeches. Designed for students who seek to improve public-speaking skills. Satisfies Oral English Competency.

**COM 361 Interpersonal Communication 3(3-0)**

*Assists the student in understanding interpersonal communication behavior including how interpersonal communication both shapes and is shaped by society. (University Program Group III-A: Behavioral Sciences)*

**COM 362 Gender Communication 3(3-0)**

*Focuses on the role of communication in creating and perpetuating gender stereotypes. Emphasis is on personal growth and awareness in a variety of contexts. Identical to WGS 362. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)*

**COM 363 Principles and Types of Interviewing 3(3-0)**

Study of establishing and achieving communication goals in a variety of formalized interviewing contexts. Emphasis given to question development and interviewing skills.

**COM 365 Persuasion and Social Influence 3(3-0)**

Application of theories and principles underlying attitude change.

**COM 367 Nonverbal Communication 3(3-0)**

Examines the non-language dimensions of communication in several social settings: dyadic, small group, crosscultural, and subcultural.

**COM 369 Health Communication 3(3-0)**

This course will assist students in increasing their understanding of communication skills applied to the health professions and healthcare settings.

**COM 401 Advanced Skills for the Communication Professional 3(3-0)**

Designed to help students integrate their communication knowledge and demonstrate higher-order thinking, decision-making, and interaction skills by applying them to professional and real-world situations. Prerequisites: Students must have completed at least 56 credit hours and at least one COM course at the 100-300 level.

**COM 461 Communication in Leadership 3(3-0)**

Theory and practice in leadership skills with special emphasis on oral communication. Examines leadership in both voluntary and non-voluntary organizations. Prerequisites: Students must have completed at least 56 credit hours and at least one COM course at the 100-300 level; or LDR 200 and junior standing.

**COM 464 Communication Internship 1-6(Spec)**

Designed to apply a variety of communication concepts and skills within a supervised organizational setting. Prerequisite: Students must have completed at least 56 credit hours, at least one COM course at the 100-300 level, and prior written approval of COM internship coordinator. Limited to COM majors and minors.

**COM 490 Independent Study 1-4(Spec)**

Student-initiated study guided by faculty member. Prerequisites: Students must have completed at least 56 credit hours, completed at least one COM course at the 100-300 level, have at least an overall 3.0 average; and have signed an Independent Study Form with a COM faculty member.

**COM 495 Communication Consulting 3-6(Spec)**

Guided experience as communication consultant. Students develop interpersonal, small group, public speaking, leadership, and supervisory communication skills in an applied setting. Repeatable up to 6 hours when content does not duplicate previous topics. Prerequisite: Students must have completed at least 56 credit hours and interview with instructor; must have completed at least one COM course at the 100-300 level or declared IPR major.

**COM 511 Crisis Communication 3(3-0)**

Current communication theories and practices in organizational crisis management and external crisis communication. Emphasis on public relations and communication. Prerequisites: Students must have completed at least 56 credit hours; at least one COM course at the 100-300 level or JRN 350, JRN 369 with a grade of C (2.0) or better; or graduate standing.

**COM 523 Dark Side of Communication 3(3-0)**

This course examines negative communication behaviors such as expression of jealousy, gossip and rumor, embarrassment, criticism, deception, coercion, and obsession. This course may be offered in an online or hybrid format. Prerequisites: 56 credit hours completed; COM 251 with a grade of C or better or declared IPR major; or graduate standing.

**COM 525 Virtual Team Communication 3(3-0)**

Examines communication issues and best practices for successful virtual teams. Includes processes for developing and maintaining virtual team identity/roles, leadership, performance, project planning/organization, and evaluation. Prerequisites: Students must have completed at least 56 credit hours and must have completed at least one COM course at the 100-300 level; or graduate standing.

**COM 527 Political Communication 3(3-0)**

This course examines American political communication and addresses the connections between political discourse, the American people, and the media. May be offered as Writing Intensive. Prerequisites: Students must have completed at least 56 credit hours and at least one COM course at the 100-300 level; or declared IPR major; or graduate standing.

**COM 555 Special Topics in Communication 3-9(Spec)**

Current topics of each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisites: Students must have completed at least 56 credit hours and at least one COM course at the 100-300 level; or graduate standing.

**COM 560 Communication and Social/Organizational Change 3(3-0)**

Research and methods of communicating changes into existing social systems. Prerequisite: Students must have completed at least 56 credit hours and at least one COM course at the 100-300 level; or declared IPR major; or graduate standing.

**COM 561 Communication in Conflict Management 3(3-0)**

Theory, research, and practical application of managing conflicts through communication. Focuses on conflict between people in the contexts of family, group, and organizations. Prerequisites: Students must have completed at least 56 credit hours and at least one COM course at the 100-300 level; or declared IPR major; or graduate standing.

**COM 563 Health Communication Campaigns 3(3-0)**

Research and methods of communicating health messages for education and disease prevention. Prerequisites: Students must have completed at least 56 credit hours and at least one COM course at the 100-300 level; or graduate standing.

**COM 565 Communication Training in Organizations 3(3-0)**

This course examines the role of training in improving communication in organizations. The course discusses the design, development, implementation, and evaluation of organizational communication training. Prerequisites: Students must have completed at least 56 credit hours and at least one COM course at the 100-300 level; or graduate standing.



**COM 568 Dating and Relating 3(3-0)**

Survey of interpersonal communication theories. Focuses on current issues and concepts in the area of interpersonal relationships. May be offered as Writing Intensive. Prerequisites: Students must have completed at least 56 credit hours and at least one COM course at the 100-300 level; or graduate status.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**COM 600 Introduction to Research and Graduate Study in Communication 3(3-0)****COM 601 Research Design in Communication 3(3-0)****COM 602 Qualitative Research Methods 3(3-0)****COM 603 Professional Seminar in Communication 1-3(Spec)****COM 619 Continuing Registration for Final Research Project 1(1-0)****COM 621 Leading Crisis Communication: Public Information and Reputation Management 3(3-0)****COM 660 Special Topics: Graduate Seminar 3-9(Spec)****COM 661 Contemporary Communication Theory 3(3-0)****COM 662 Seminar in Persuasion 3(3-0)****COM 664 Seminar in Organizational Communication 3(3-0)****COM 665 Seminar in Communication and Negotiation in Employee Relations 3(3-0)****COM 667 Seminar in Intercultural Communication 3(3-0)****COM 695 Teaching Mentorship 1-3(Spec)****COM 750 Seminar in Rhetorical Criticism 3(3-0)****COM 764 Communication Internship 1-6(Spec)****COM 790 Advanced Independent Study 1-4(Spec)****COM 795 Seminar: Teaching College Communication 3(2-2)****COM 798 Thesis 1-6(Spec)**

## CPS - Computer Science

*See the Department of Computer Science for more information.*

**CPS 101 A First Byte of Computer Science 3(3-0)**

Introduction to the principles underlying the programmable world around us and the interplay of the different system components that drive the information society. Recommended: MTH 107 or equivalent. (University Program Group II-A: Descriptive Sciences)

**CPS 105 Word Processing Concepts 1(1-0)**

Introduction to word processing and desktop publishing concepts. Use of beginning and advanced features in a modern word processing application such as Microsoft Word.

**CPS 106 Spreadsheet Concepts 1(1-0)**

Introduction to spreadsheets and report generation concepts. Use of beginning and advanced features in a modern spreadsheet application such as Microsoft Excel.

**CPS 107 Database Concepts 1(1-0)**

Introduction to databases and report generation concepts. Use of beginning and advanced features in a modern database application such as Microsoft Access.

**CPS 165 Modern Website Design 3(3-0)**

Design and development of dynamic and interactive user-friendly websites. Maintain a web portfolio. Learn about web publishing best practices with consideration of social media.

**CPS 180 Principles of Computer Programming 3(3-0)**

Algorithm development and problem solving methods. Design and development of computer programs in a structured programming language. Pre/Co-requisite: One of MTH 130, 132, 133, 217. (University Program Group II-B: Quantitative and Mathematical Sciences)

**CPS 181 Introduction to Data Structures 3(3-0)**

Continuation of CPS 180; Abstract Data Types using core programming library classes (such as stacks, queues, linked lists, and binary trees); Recursion; Sorting and Searching. Prerequisite: CPS 180; Recommended: MTH 132, MTH 175 or MTH 217.

**CPS 190 Introduction to Programming in Python 3(3-0)**

Design and development of computer programs in the Python programming language. Introduction to basic programming control structures and elementary data processing. (University Program Group II-B: Quantitative and Mathematical Sciences)

**CPS 191 Python Programming II 3(3-0)**

Continuation of CPS 190. Design and development of computer programs to access data, automate tasks, and perform event handling. Prerequisite: CPS 190.

**CPS 210 Computer Organization and Communications 3(3-0)**

Introduction to computer organization, machine representation of information, models of computer architecture, remote application programming interfaces. Pre/Co-requisite: CPS 181; Recommended: MTH 132.

**CPS 240 Object-Oriented Programming, Analysis and Design 3(3-0)**

Detailed coverage of the object-oriented programming paradigm and concepts, design patterns, distributed objects, graphical user interfaces and event handling. Software design in teams. Prerequisite: CPS 181 with a C or better.

**CPS 254 Data Visualization and Programming Using Python 1(1-1)**

Introduce Python programming language for data science. Topics include data wrangling, management, manipulation, visualization and exploration using Python. This is one-credit, five-week course. Identical to DAS 254. Credit may not be earned in more than one of these courses. Prerequisite: One of: BIO 500, DAS 150QR, ECO 285, GEO 512, HSC 544, PSY211QR, SOC 200, STA 282QR, 382QR, 392.

**CPS 270 Computational Analysis and Simulation 3(3-0)**

Modeling and simulation via computing and numerical calculations. Emphasis will be on implementing algorithms in a high-level programming language and the associated implications. Prerequisites: CPS 181; MTH 132.

**CPS 280 Alternative Programming Languages 3(3-0)**

Intensive study of one or more selected object-oriented programming languages. Languages presented will be announced in Course Search and Registration. Students may not earn credit for a language in which they already have credit in one of the primary programming sequences. Prerequisite: CPS 181.

**CPS 282 Introduction to Multimedia Design 3(3-0)**

Introduction to multimedia concepts. Survey of multimedia applications in fields such as education, business and entertainment. Introduction to multimedia authoring tools. Hands-on projects.

**CPS 285 Programming for Data Science 3(3-0)**

Overview of tools and techniques to process data with the aim of producing actionable insights. Introduction to the cleaning, filtering, transforming and querying of data. Prerequisite: CPS 180.

**CPS 294 Foundation of Mobile Application Development 3(3-0)**

Design, build, and deploy event-driven mobile applications using current patterns, frameworks, and tools. Combine local and remote sensing/actuating, execution, and persistency. Prerequisite: CPS 181 or CPS 191.

**CPS 296 Special Topics in Computer Science 1-6(Spec)**

Selected technical topics of the latest developments in the field. These topics are normally not covered in existing courses. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Prerequisite: 24 credit hours completed.

**CPS 301 Social Issues of Computing and Professional Practice 1(1-0)**

Surveys the central ethical, legal and social issues intrinsic to the discipline of computing. Introduces common professional development schemes used in the computing industry. Prerequisites: 26 hours completed. Recommended: ENG 201.

**CPS 321 Human Computer Interaction 3(3-0)**

User interface design and human-computer interaction. Understanding the user. Design and prototyping of highly usable interfaces. Event-driven programming language for rapid prototyping. Prerequisites: CPS 240 or 280.

**CPS 333 Introduction to Computer Security and Cryptography 3(3-0)**

Introduction to computer and network security, cybersecurity, confidentiality, integrity, availability, authentication, authorization, accountability, access control, security/threat models, cryptography, encryption, decryption, signatures. Prerequisite: CPS 240 and MTH 321.

**CPS 340 Advanced Data Structures and Algorithms 3(3-0)**

Theory of advanced techniques for representing information: lists, trees, graphs. Analysis of algorithms: sorting, searching and hashing techniques. Prerequisites: CPS 181 with a grade of C- or better; CPS 210 or EGR 396. Pre/Co-requisite: MTH 223 or MTH 232. Recommended: CPS 240.

**CPS 360 Computer Design and Architecture 3(3-0)**

Design and analysis of digital circuits, processor datapath, instruction set architecture, cache memory, pipelined instruction execution, virtual memory. Prerequisite: CPS 210.

**CPS 373 Network Security 3(3-0)**

Security in computer, mobile and communication networks; confidentiality, integrity, availability, access controls in networks; security in network protocols and applications at layers in OSI model. Prerequisites: ITC 265 and CPS 333.

**CPS 375 Social Engineering, Cybersecurity Law, Policy and Ethics 3(3-0)**

Data and privacy in the context of the human factor and society, including social engineering security, cybersecurity law, cybersecurity ethics, cybersecurity policy, and cybersecurity privacy. Prerequisite: CPS 333.

**CPS 382 Advanced Multimedia Design 3(3-0)**

Design interactive multimedia projects using advanced authoring tools and discuss issues concerning representation, storage, compression, transmission, and manipulation of various multimedia components. Prerequisite: CPS 240 or 282.

**CPS 395 Internship in Computer Science 1-9(Spec)**

Supervised work experience in computer science. Only 3 hours may count toward the major. Any additional hours must provide a significantly different educational experience. CR/NC only. Prerequisites: CPS 210 or ITC 191; permission of department chairperson.



**CPS 396 Special Topics in Computer Science 1-6(Spec)**

Selected technical topics of the latest developments in the field. These topics are normally not covered in existing courses. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Prerequisite: 40 credit hours completed.

**CPS 410 Senior Design I 3(3-0)**

Software specification, design methods, programming and testing techniques and CASE tools. Developing large software systems in a group environment using modern software engineering techniques. Prerequisites: CPS 301, CPS 340, CPS 360. Must be 2nd semester junior or 85+ credit hours.

**CPS 420 Web Application Development - Web Services SOA 3(3-0)**

Web-based applications focusing on server-side processing, data persistence, use of web services, Service Oriented Architecture, remote procedure calls, asynchronous messaging, transactions and security considerations. Prerequisite: CPS 340 or ITC 320. Recommended: ITC 341.

**CPS 450 Programming Language Concepts 3(3-0)**

Formal definition of programming languages including specification of syntax and semantics. Prerequisites: CPS 240, CPS 340.

**CPS 463 Hardware Security 3(3-0)**

Hardware security; Trojan Horse, Supply Chain Attacks, IP Piracy, Side-Channel Attacks, Reverse Engineering, and Countermeasures. Prerequisites: CPS 333, 360.

**CPS 470 Introduction to Operating Systems 3(3-0)**

Operating systems as resource manager. Study of the strategies used to manage system resources such as devices, files, memory, processors. Prerequisites: CPS 340, CPS 360.

**CPS 475 Software, Database, and Operating System Security 3(3-0)**

Software and operating system security, including holistic approach, static and dynamic testing, buffer-overflow exploits and defense, database security, SQL injection attacks, and virtualization. Prerequisites: CPS 333, 470.

**CPS 477 Security Informatics: AI and Visualization 3(3-0)**

AI for security, trustworthiness of AI, security and privacy of data mining/machine learning based applications, adversarial machine learning, security visualization, anomaly detection. Prerequisites: CPS 333, 480.

**CPS 480 Introduction to Artificial Intelligence 3(3-0)**

Automated reasoning, search strategies, knowledge representation, game playing, expert systems, machine learning and perception; applications. Prerequisites: CPS 340.

**CPS 496 Special Topics in Computer Science 1-6(Spec)**

Selected technical topics of the latest developments in the field. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Prerequisite: See course search and registration.

**CPS 497 Independent Study 1-6(Spec)**

Open to students with permission of instructor. May be taken for credit more than once, total credit not to exceed 6 hours. Prerequisite: Permission of instructor.

**CPS 498 Senior Design II 3(2-2)**

Senior design course for CPS major. This course integrates design methods and software engineering techniques in the context of a realistic information processing system-based project. Prerequisite: CPS 410.

**CPS 501 Survey of Computer Science 3(3-0)**

Overview of computer organization, programming languages, various computer applications, information management systems and ethical implications of computing. Does not count toward CPS major or minor or the MS in Computer Science. Prerequisite: Senior or graduate standing.

**CPS 510 Software Systems Engineering 3(3-0)**

Covers requirements analysis and techniques to develop a system from those requirements. Credit will not be given for both CPS 410 and CPS 510. Does not count for the M.S. in Computer Science. This course is approved for offering in a distance learning format. Prerequisites: CPS 340; MTH 175.

**CPS 520 Software Architecture 3(3-0)**

Study of software architecture styles and quality attributes; achieving software quality; designing, documenting, and restructuring software architecture evaluation; tools for architectural design. Prerequisite: CPS 410 or graduate status.

**CPS 525 Introduction to Text Mining 3(3-0)**

Overview of tools and techniques to process text data with the aim of production actionable insights. Introduction to the cleaning, filtering, transforming and querying of text data. Prerequisites: CPS 181, CPS 240 or CPS 280 or CPS 285; or admitted to the Master of Science in Computer Science program.

**CPS 531 Distributed Programming 3(3-0)**

Study of design and implementation issues in distributed programming, including event model, client/server, distributed data processing, remote objects, network services, and security. Prerequisite: CPS 340 or admission into CPS graduate program.

**CPS 541 Modern Databases 3(3-0)**

Relational databases, data modeling, NoSQL databases, and data warehousing. Design and develop databases for various applications. Prerequisites: CPS 340 or ITC 341 or graduate standing.

**CPS 542 Analysis and Design of Algorithms 3(3-0)**

Analysis of algorithms including computing time and space requirements. Efficient algorithm design techniques. Introduction to parallel algorithms and computational complexity classes. Prerequisite: CPS 340 or admitted to the Master of Science in Computer Science program.

**CPS 580 Supervised Machine Learning 3(3-0)**

Theory and tools for supervised machine learning. Overview and application of architectures and training techniques applicable to image classification, object recognition and text generation. Prerequisites: CPS 340 or ITC 510 or CPS 285, DAS 450.

**CPS 581 Introduction to Biocomputing and Evolutionary Computation 3(3-0)**

Use of elementary automata theory, limits on computation, cellular automata, neuron models, evolutionary (genetic) algorithms and learning, and Artificial Immune Systems, DNA, and quantum computing. Prerequisites: CPS 340 or graduate standing.

**CPS 583 Nonlinear Dynamics and Learning 3(3-0)**

Elementary nonlinear dynamics and chaos theory. Correlation dimension. Approximate, Sample, and Multiscale entropies. Cellular automaton dynamics. Entropy analysis and learning in time series data. Prerequisites: CPS 340 or graduate standing.

**CPS 585 Applied Data Engineering 3(3-0)**

Study of data engineering concepts and techniques, including data collection, cleaning, transformation, security and storage. Construction of a data pipeline in an applied setting. Prerequisites: CPS 181; CPS 240 or CPS 280 or CPS 285; or admitted to the Master of Science in Computer Science program. Recommended: ITC 341.

**CPS 596 Special Topics in Computer Science 1-6(Spec)**

Selected topics in computer science not otherwise available in a course regularly offered. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Prerequisite: See Course Search and Registration. Determined by the specific topics presented.

**CPS 597 Independent Study 1-6(Spec)**

Exploration of topics in Computer Science agreed upon by student and instructor. May be taken for credit more than once, total credit not to exceed six hours. Prerequisite: Permission of instructor.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**CPS 603 Computer Information Systems 3(3-0)****CPS 610 Advanced Software Design and Development 3(3-0)****CPS 612 Software Project Management 3(3-0)****CPS 619 Continuing Registration for Final Research Project 1(1-0)****CPS 641 Advanced Topics in Databases 3(3-0)****CPS 650 Theory and Practice of Compiler Construction 3(3-0)****CPS 680 Artificial Intelligence 3(3-0)****CPS 685 Pattern Recognition and Data Mining 3(3-0)****CPS 691 Research Design and Professional Practice 3(3-0)****CPS 695 Professional Field Experience 1-6(Spec)****CPS 696 Special Topics in Computer Science 1-6(Spec)****CPS 697 Independent Study 1-6(Spec)****CPS 718 Capstone Project 3(3-0)****CPS 698 Software Engineering Metrics, Models and Management 3(3-0)****CPS 798 Thesis 1-6(Spec)**

## CRM - Cultural Resource Management

*See the College of Liberal Arts and Social Sciences for more information.*

**CRM 540 Archaeological Field and Laboratory Techniques 3(3-0)**

Practical instruction in archaeological methods including field survey and excavation; description, classification, data analysis, and documentation of cultural materials in the laboratory. Identical to ANT 540. Credit may not be earned in more than one of these courses. Prerequisites: ANT 175 and one of the following: ANT 340, 344, 348; or Graduate standing.

**CRM 542 Methods in Forensic Anthropology: Osteology and Skeletal Analysis 4(3-2)**

Lectures and laboratory training in forensic identification and analysis of human skeletal remains for utilization by criminal justice authorities, missing persons bureaus, archaeologists and paleoanthropologists. Identical to ANT 542. Credit may not be earned in more than one of these courses. Prerequisites: ANT 173, 342, or 347; or graduate standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**CRM 700 Directed Student Research in Archaeology 1-6(Spec)****CRM 798 Thesis 1-6(Spec)**

## CSD - Communication Sciences & Disorders

See the Department of Communication Sciences & Disorders for more information.

### CSD 130 Normal Speech and Language Acquisition 3(3-0)

Study of normal acquisition of language and speech of children examined on the basis of current linguistic theory. (University Program Group III-A: Behavioral Sciences)

### CSD 230 Introduction to Speech, Language, and Hearing Disabilities/Differences in Society 3(3-0)

Study of types and management of communicative disorders experienced by people of all ages/cultures, with emphasis on portrayal of disabilities in literature/film and societal responses. (University Program Group IV-A: Studies in Discrimination)

### CSD 278 Normal Speech Developmental/Descriptive Phonetics 3(3-0)

Study of speech sound acquisition emphasizing broad and narrow transcription of normal and disordered American English speech sound production using the International Phonetic Alphabet.

### CSD 297 Special Topics in Communication Disorders 1-6(Spec)

Selected topics/problems/current issues of interest not normally included in existing courses. Current topic(s) are listed in the semester Class Schedule. Repeatable up to 6 credits when content does not duplicate previous special topics studies. Prerequisite: Determined specific to the topic presented. See Class Schedule.

### CSD 330 Language Development 3(3-0)

Study of language development in typically developing children from birth through adulthood; oral language sample analysis; language characteristics in disordered language learners.

### CSD 331 Introduction to Audiology 3(3-0)

Anatomy and basic psychophysics of hearing, pathologies causing hearing loss, and measurement procedures used to test hearing. Prerequisite: 24 credit hours. Recommended: Math competency and one course in the natural sciences.

### CSD 335 The Anatomy and Physiology of Speech and Hearing 3(3-0)

Anatomical structures and functions for speech and hearing.

### CSD 338 Introduction to Speech Sound Disorders 3(3-0)

The study of assessment and evidence-based intervention approaches of speech sound disorders. Prerequisites: Signed Communication Sciences and Disorders (CSD) major or minor; CSD 278, CSD 335.

### CSD 340 Child Language Assessment and Intervention 3(3-0)

Formal/informal assessment of language, cognition, and communication functioning in infant through school-aged children not developing normal language parameters: intervention approaches for deficits in language. Prerequisites: Signed CDO or CSD major or minor; CSD 330.

### CSD 417 Introduction to Adult Communication Disorders 3(Spec)

This service-learning course explores the nature and impact of speech, hearing, language, and cognitive-communication disorders through real-life communication opportunities with older adults. Prerequisites: Admitted to CSD program; CSD 335.

### CSD 431 Audiologic Rehabilitation 3(3-0)

Habilitative and rehabilitative issues/approaches for persons with hearing loss, including hearing aids, cochlear implants, speechreading, conversational strategies, auditory training, speech/language intervention, psychosocial adjustment, and education. Prerequisite: Admitted to the CSD program; CSD 331.

### CSD 432WI Clinical Communication in Speech-Language Pathology 3(3-0)

Clinical communication using case-based formats to interpret/report outcome data and develop oral/written skills in correspondence with clients, families, and stakeholders. Writing Intensive. Prerequisites: Signed CDO/CSD major; Pre/Co-requisites: CSD 439, 494.

### CSD 438 Language Disorders in Special Education Populations 3(3-0)

This course assists special education teachers and other related professionals in the management of language disorders for children in various diagnostic categories.

### CSD 439 Diagnostic and Intervention Methods in Speech Language Pathology 3(3-0)

Classroom lecture integrating the clinical interaction process with clinical principles and techniques. Prerequisites: Signed CDO/CSD major; CSD 278, CSD 338, CSD 340.

### CSD 463 Introduction to Acoustic Phonetics 3(3-0)

Physical properties of sound generation, transmission, reception, and perception. Acoustics of American English phonemes and acoustic-physiologic relationships for human sound production. Prerequisites: Admitted to CSD program; CSD 278, CSD 335.

### CSD 490 Independent Study 1-3(Spec)

Student-initiated study guided by faculty member or faculty committee. Prerequisites: Permission of instructor; completion of Course Contract document.

### CSD 494 Mentored Practicum in Communication Disorders 4(2-4)

Supervised clinical assignment with an experienced student mentor encompassing up to 4 hours per week; with required weekly lectures regarding clinical procedures, issues, and cases. CR/NC only. Prerequisites: Admitted to CSD program; CSD 338, CSD 340.

### CSD 495 Clinical Experience: Communication Disorders 3-6(Spec)

Enables students in communication disorders to carry out directed supervised clinical practicum. Weekly discussion of clinical problems and cases. CR/NC only. Prerequisites: Admitted to CSD program; CSD 278, CSD 330, CSD 331, CSD 335, CSD 338, CSD 340, CSD 439, CSD 494; a grade point of at least 3.0.

### CSD 512 Supporting Students with Literacy Disorders 3(3-0)

Learn how the foundations of literacy are built on oral language and how to assess and remediate literacy issues. Prerequisites: 55 credit hours completed or graduate status.

### CSD 525 Research Design in Communication Disorders 3(3-0)

Study of critical evaluation of scientific literature. Research in evidence-based practice related to clinical decision-making. Exploration of quantitative, qualitative and mixed-method research design procedures. Prerequisites: Signed Communication Sciences and Disorders (CSD) major or minor; STA 282QR or PSY 211QR; or admission to the graduate program in Speech-Language Pathology or Audiology.

### CSD 537 Special Topics in Communication Sciences and Disorders 1-6(Spec)

Selected topics/problems/current issues of interest not normally included in existing courses. Current topic(s) are listed in the semester Class Schedule. Repeatable up to 6 credits when content does not duplicate previous special topics studies. Prerequisites: Determined specific to the topic presented. See Class Schedule.

### CSD 538 Corporate Speech-Language Pathology 2(2-0)

Designed for SLPs to work with clients exhibiting communication inhibitors. Open to non-CSD/SLP students to improve their corporate communication skills. Prerequisite: Students must have already satisfied the Oral English Competency or graduate status.

### CSD 540 The Engaged Clinician: Our Behavior Matters 2(2-0)

Clinical engagement is a cornerstone in maximizing therapeutic outcomes. This course will explore core engagement principles and offer skill-building opportunities for entering client/family partnerships. Prerequisite: CSD 494 or admission to the graduate program in Speech-Language Pathology.

### CSD 550 Communication Assessment and Intervention in Children with Autism Spectrum Disorders 3(3-0)

This course examines evidence-based practices and procedures in communication assessment and intervention strategies for individuals with autism spectrum disorders. Prerequisites: SPE 530; senior or graduate status.

### CSD 551 Autism Spectrum Disorders: A Clinical Focus 3(3-0)

This course examines evidence-based practices and clinical procedures for communication assessment and intervention of clients with autism spectrum disorders and social pragmatic communication disorders. Prerequisites: Signed CSD major or minor; or graduate status in speech-language pathology or audiology.

### CSD 588 Neuroscience for Communication Sciences and Disorders 3(3-0)

Fundamental aspects of normal neuroanatomy and neurophysiology underlying human communication; etiologies and effects of select neuropathologies encountered in communication disorders. Prerequisites: Acceptance into the communication sciences and disorders major or the speech-language pathology graduate program.

### CSD 595 Literacy Clinical Practicum 3(Spec)

Literacy clinical experience with an approved clinical instructor in appropriate on-or off-campus clinical setting. CR/NC only. This course may be offered in an online format. Prerequisites: CSD 512, EDU 533, EDU 537, EDU 531 or SLP 720, EDU 540.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

### CSD 619 Continuing Registration for Final Research Project 1(1-0)

### CSD 790 Advanced Independent Study 1-9(Spec)

## DAN - Dance

See the Department of Theatre and Dance for more information.

### DAN 104 Latin Dance I 1(1-0)

Introduction to the social dances of Central and South America and other Latin cultures. Emphasis on basic steps; rhythmical patterning and development of style.

### DAN 105 Social Dance I 1(Spec)

Introduction to social dance forms and styles.

### DAN 106 Country Line Dance 1(Spec)

Introduction to the basic elements and skills used in the performance of country line dance.

### DAN 107 Swing Dance 1(Spec)

Introduction to the basic steps and styles of swing dance.

**DAN 109 World Dance 2-6(Spec)**

Beginning instruction in and an introduction to a world dance technique (as determined by instructor's area of study). This course may be repeated up to three times when course material does not repeat.

**DAN 125 Introduction to Alexander Technique 2(1-1)**

This class is a body awareness and movement class based on the Alexander Technique.

**DAN 126 Hip Hop 2(1-2)**

Beginning instruction in and an introduction to the various styles of Hip Hop Dance.

**DAN 127 Ballroom Dance 1(1-0)**

An introduction to the various techniques and styles of ballroom dance.

**DAN 133 Modern I 2(1-2)**

Beginning instruction in and an introduction to the various techniques and styles of modern dance.

**DAN 136 Ballet I 2(1-2)**

Beginning instruction in and an introduction to ballet.

**DAN 137 Tap I 2(1-2)**

Beginning instruction in and an introduction to tap dance technique.

**DAN 138 Jazz I 2(1-2)**

Beginning instruction in and an introduction to jazz dance technique.

**DAN 175 Dance Appreciation 3(3-0)**

An introduction to dance designed to develop an aesthetic awareness, appreciation, and understanding of the art of dance.

**DAN 226 Hip Hop II 2-6(Spec)**

This course is designed for students who want to continue their study of hip hop dance technique and builds upon the skills acquired in DAN 126. It may be repeated up to three times in order to continue a progressive development of hip hop technique. Prerequisite: DAN 126.

**DAN 230 Movement-Rhythmic Form and Structure 3(3-0)**

This course is an in-depth study of the dynamic functions of movement, dance, and rhythmic structures.

**DAN 231 Fundamental Movement 2(2-0)**

Analysis of both locomotor and non-locomotor movement in relationship with human anatomy with an emphasis on strength, flexibility, alignment, and physical development of the individual.

**DAN 232 Dance Composition I 2(2-0)**

Introduction to the basic elements of dance composition through the use of creative problem solving. Prerequisite: One of: DAN 126, 133, 136, 137, 138.

**DAN 233 Modern II 2-6(Spec)**

This course is designed for students who want to continue their study of modern dance technique and builds on the skills acquired in DAN 133. It may be repeated up to three times in order to continue a progressive development of modern dance technique. Prerequisite: DAN 133.

**DAN 236 Ballet II 2-6(Spec)**

This course is designed for students who want to continue their study of ballet technique and builds on the skills acquired in DAN 136. It may be repeated up to three times in order to continue a progressive development of ballet technique. Prerequisite: DAN 136.

**DAN 237 Tap II 2-6(Spec)**

This course is designed for students who want to continue their study of tap dance technique and builds on the skills acquired in DAN 137. It may be repeated up to three times in order to continue progressive development of tap technique. Prerequisite: DAN 137.

**DAN 238 Jazz II 2-6(Spec)**

This course is designed for students who want to continue their study of jazz dance technique and builds on the skills acquired in DAN 138. It may be repeated up to three times in order to continue a progressive development of jazz technique. Prerequisite: DAN 138.

**DAN 242 Writing About Dance 3(3-0)**

The course will focus on writing about dance using multiple compositional forms, which include performance critiques, research articles, artist statements and observations. Prerequisite: DAN 175.

**DAN 243 Dance and Technology 2(1-2)**

A study of existing and emerging technologies that may be used to create and/or enhance dance performance. Prerequisites: One of: DAN 126, 133, 136, 137, 138.

**DAN 251 Performing Arts Administration 3(3-0)**

An introduction to performing arts administration including leadership structures, database management, development (funding), public relations, and marketing.

**DAN 305 Studio: Dance Performance 1-4(Spec)**

Major participation in faculty/staff-supervised university theatre activity in the areas of dance performance or choreography. One-credit course is repeatable up to four times for separate projects. Prerequisite: Permission of the instructor.

**DAN 326 Hip Hop III 2-6(Spec)**

This course is designed for students who want to continue their study of hip-hop dance technique and builds on the skills acquired in DAN 226. It may be repeated up to three times in order to continue a progressive development of hip-hop technique. Prerequisite: DAN 226.

**DAN 332 Dance Composition II 3(3-0)**

This course is an exploration of intermediate dance choreography strategies and expands on the skills acquired in DAN 232. Prerequisite: DAN 232.

**DAN 333 Modern III 2-6(Spec)**

This course is designed for students who want to continue their study of modern dance technique and builds on the skills acquired in DAN 233. It may be repeated up to three times in order to continue a progressive development of modern technique. Prerequisite: Permission of instructor.

**DAN 334 Teaching of Folk, Square, and Social Dance 3(3-0)**

Skills, techniques, and materials for teaching.

**DAN 336 Ballet III 2-6(Spec)**

This course is designed for students who want to continue their study of ballet technique and builds on the skills acquired in DAN 236. It may be repeated up to three times in order to continue a progressive development of ballet technique. Prerequisite: Permission of instructor.

**DAN 337 Tap III 2-6(Spec)**

This course is designed for students who want to continue their study of tap dance technique and builds on the skills acquired in DAN 237. It may be repeated up to three times in order to continue a progressive development of tap technique. Prerequisite: Permission of instructor.

**DAN 338 Jazz III 2-6(Spec)**

This course is designed for students who want to continue their study of jazz dance technique and builds on the skills acquired in DAN 238. It may be repeated up to three times in order to continue a progressive development of jazz technique. Prerequisite: Permission of Instructor.

**DAN 340 Dance Repertory Theatre and Tour Company 2-8(Spec)**

Study of choreography created by members of the dance faculty and guest artists, leading to public performance. Prerequisite: Audition.

**DAN 341 Methods of Teaching Dance 3(3-0)**

Methods of teaching dance will be covered in this course. The techniques covered may be applied to various dance genres. Prerequisite: One of: DAN 233, 236, 237, 238.

**DAN 342 Screendance 3(3-0)**

An analysis of the elements of screendance, history and methods of creating dance for the purpose of making dance cinema. Prerequisite: DAN 232.

**DAN 343 Dance Composition for Music Theatre 3(3-0)**

An analysis of the elements of music theatre choreography and methods of composing dance for music theatre. Prerequisite: DAN 232. Recommended: TAI 380.

**DAN 430 Dance Production 3(3-0)**

A course covering the process of creating a dance production including technical and design elements, auditions, house management, and programming. Prerequisites: Two DAN Courses.

**DAN 435 Methods of Creative Movement 2(Spec)**

Techniques and procedures for teaching rhythm and dance activities for the physical education and dance teacher in grades K-12.

**DAN 480 Dance Practicum 1-3(Spec)**

Curriculum planning and teaching of pre-school, K-12, college, or adult dance classes in a professional environment. Number of credits vary depending on the scope of the assignment. Course is repeatable up to 3 total credits on separate projects. Prerequisites: DAN 341 and permission of instructor.

**DAN 494 Field Study in Dance 1-3(Spec)**

An approved study in a specific area of dance performed off campus. Number of credits vary depending on the scope of the assignment. Course is repeatable up to 3 total credits on separate projects. Prerequisite: Permission of instructor.

**DAN 530 History of Dance 3(3-0)**

A study of the history of global dance traditions and values and the varying ways dance shapes, responds to, and is integrated within cultures. Prerequisite: Junior or graduate standing.

**DAN 540 Dance Studies Internship 6(Spec)**

Experience in a specific area of the dance industry under faculty and professional supervision. Prerequisites: Signed Dance Studies major, Junior standing, permission of instructor, internship application.

**DAN 541 Senior Capstone 3(3-0)**

Dance Studies capstone course that integrates theory, history, practical, production and dance industry experiences with student's career goals. Must be completed in student's final year of study. Prerequisites: Signed Dance Studies major, permission of instructor.

**DAN 578 Special Topics in Dance 1-9(Spec)**

Current topics in dance for each semester listed in Course Search and Registration. This course may be repeated for up to 9 credit hours. Prerequisite: Two undergraduate courses in Dance with a C or better.

## DAS - Data Science

See the Department of Statistics, Actuarial and Data Sciences for more information.

**DAS 150QR Introduction to Data Science 3(2-2)**

A hands-on introduction to data science. Exploring key concepts related to data science, including exploratory data analysis, information visualization, text mining, and machine learning. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Sciences)



**DAS 251 Data Visualizations and Programming using Tableau 1(1-1)**

Data visualization through Tableau to uncover data features and relationships. Focus on connecting to data, building different types of charts, table calculations, statistical modelling. Prerequisite: One of: DAS 150QR, STA 282QR, STA 382QR, STA 392, BIO 500, PSY 211QR, SOC 200, HSC 544, GEO 512.

**DAS 252 Data Visualization and Programming using R/RStudio 1(1-1)**

Introduce R programming language for data science. Topics include data wrangling, management, manipulation, visualization and exploration using different R packages. Prerequisite: One of: DAS 150QR, STA 282QR, 382QR, 392, BIO 500, PSY 211QR, SOC 200, HSC 544, GEO 512.

**DAS 253 Data Visualization and Programming using SAS 1(1-1)**

Introduction to SAS programming and basic descriptive data analysis using SAS Enterprise Guide. This is a one-credit, five-week module. Prerequisite: One of: DAS 150QR, STA 282QR, 382QR, 392, BIO 500, PSY 211QR, SOC 200, HSC 544, GEO 512.

**DAS 254 Data Visualization and Programming Using Python 1(1-1)**

Introduce Python programming language for data science. Topics include data wrangling, management, manipulation, visualization and exploration using Python. This is one-credit, five-week course. Identical to CPS 254. Credit may not be earned in more than one of these courses. Prerequisite: One of: BIO 500, DAS 150QR, ECO 285, GEO 512, HSC 544, PSY211QR, SOC 200, STA 282QR, 382QR, 392.

**DAS 260 Data Integrity and Ethics 1(1-0)**

The course explores ethics related to data science. Topics include data ownership and validity, societal consequences; maintenance of accurate and consistent data over its life. Prerequisite: One of: DAS 150QR, STA 282QR, 382QR, 392, BIO 500, PSY 211QR, SOC 200, HSC 544, GEO 512.

**DAS 350 Exploratory Data Analytics 3(2-2)**

Topics include data exploration and analysis. Various techniques will be utilized to explore and visualize real-world massive datasets from different domains. Prerequisite: DAS 252.

**DAS 450 Applied Analytics I 3(3-1)**

Techniques for data science. Topics include unsupervised techniques and basic predictive modeling techniques. Prerequisites: DAS 251, 252, 253, 350.

**DAS 460 Applied Analytics II 3(3-1)**

Predictive modeling techniques for data science. Topics include tree models, shrinkage techniques, support vector machine, neural network, deep learning and Naïve Bayes. Prerequisites: DAS 450.

**DAS 495 Capstone/Practicum 3(3-0)**

Students work on independent research projects. Problems may be from internship experience, prior courses or another source, subject to instructor approval. Prerequisites: DAS 460; Senior Standing.

**DBI - Deafblind Intervener**

See the Department of Recreation, Parks, and Leisure Administration for more information.

**DBI 101 Introduction to Deafblindness and Intervention 3(3-1)**

Covers the diversity of the population that is deafblind, introduces the role of the intervener, and the practice of intervention for students who are deafblind. This course will be offered only in an online format.

**DBI 201 Building Communication and Language Skills 3(3-1)**

An introduction to communication and language development, with an emphasis on strategies for increasing the communication repertoires of students who are deafblind. This course will be offered only in an online format. Prerequisite: DBI 101.

**DBI 301 Intervention Strategies and Teaming 3(3-1)**

A range of strategies that can be used by interveners in the field, including teaming and collaboration. This course will be offered only in an online format. Prerequisite: DBI 201.

**DBI 302 Intervention Practicum 3(Spec)**

Final class for the Intervener Certificate Program. Student portfolios demonstrating the Council for Exceptional Children (CEC) Competencies for interveners are completed. This course will be offered only in an online format. Prerequisite: DBI 301.

**DHA - Degrees in Health Administration**

See the School of Health Sciences for more information.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**DHA 619 Continuing Registration for Final Research Project 1(1-0)****DHA 700 Leadership Strategies for Healthcare Policy and Organizations 3(3-0)****DHA 702 Probability and Statistics for the Health Professions 3(3-0)****DHA 704 Population Health 3(3-0)****DHA 705 Seminar in Public Health 1(Spec)****DHA 706 Quantitative Analysis in Health Organization 3(3-0)****DHA 708 Organizational Theory and Behavior for the Health Professions 3(3-0)****DHA 709 Seminar in Health Dynamics: Current Issues, Trends and Change 1(1-0)****DHA 710 Qualitative Analysis in Health Care 3(3-0)****DHA 712 Research Methods and Practice for the Health Professions 3(3-0)****DHA 713 Seminar in Health Services Research 1(1-0)****DHA 714 Health Systems Thinking and Practice 3(3-0)****DHA 716 Communication in Health Organizations 3(3-0)****DHA 717 Seminar in Healthcare Dynamics: Stakeholder Relations 1(1-0)****DHA 718 Healthcare Law, Regulations and Ethics 3(3-0)****DHA 720 Health Economics 3(3-0)****DHA 721 Seminar in Healthcare Policy and Politics 1(1-0)****DHA 722 Health Informatics 3(3-0)****DHA 724 Fiscal Responsibility and Accountability in Healthcare 3(3-0)****DHA 725 Seminar in Strategic Planning for Health Organizations 1(1-0)****DHA 726 Applied Leadership 3(3-0)****DHA 728 Comparative Health Systems 3(3-0)****DHA 898 Dissertation 1-12(Spec)****ECE - Early Childhood Education**

Contact the Department of Teacher and Special Education for more information.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**ECE 625 Foundations of Early Childhood Education 3(3-0)****ECE 628 Language and Literacy Development of Young Children 3(3-0)****ECE 629 Promoting Parent Involvement in Early Childhood Education 3(3-0)****ECE 630 Culturally Responsive Early Childhood Programs 3(3-0)****ECE 644 Early Childhood Concept Development and Creativity 3(3-0)****ECE 657 Cognitive and Psycho-Motor Development of Young Children: Theory and Practice 3(3-0)****ECE 777 Seminar: Current Issues in Early Childhood Education 3(3-0)****ECO - Economics**

See the Department of Economics for more information.

**ECO 101 Economics as a Way of Thinking 3(3-0)**

Introduction to the economic way of thinking and its applications to decision making in daily living. Emphasis on basic understanding of the economic aspects of current issues. Credit on the Economics major will be given only if this course is taken prior to the following courses: ECO 201, 202, 203.

**ECO 110 Economics and Society 3(3-0)**

An examination of the development of economic thought and institutions with emphasis on the application of this knowledge to the understanding of today's world. Credit on the economics major will not be given if this course is taken after ECO 201 or ECO 202 or ECO 203.

**ECO 150 Current Economic Problems 3(3-0)**

Economic topics of current national and international concern. Economic issues with which informed voters must deal. No credit if credit has been earned in ECO 201 or ECO 202 or ECO 203 or ECO 204. (University Program Group III-B: Studies in Social Structures)

**ECO 201 Principles of Macroeconomics 3(3-0)**

Provides understanding of basic principles of economics, methods of National Income accounting, inflation, unemployment, role of government, money and banking, monetary policy, and international economics. Credit may not be earned in more than one of ECO 201 and ECO 204. (University Program Group III-B: Studies in Social Structures)

**ECO 202 Principles of Microeconomics 3(3-0)**

Introduction to scarcity, choice, and opportunity cost; supply and demand; welfare economics; household and firm behavior; competition and monopoly; resource markets. Credit may not be earned in more than one of ECO 202 and ECO 203. (University Program Group III-B: Studies in Social Structures)

**ECO 203 Microeconomic Principles for Business 3(3-0)**

Introduction to economic decision-making by consumers and managers within a market system. Topics include supply, demand, elasticity, production, costs, price, market structure, and resource markets. Credit may not be earned in more than one of ECO 203 and ECO 202. Prerequisites: BUS 100, admission to Professional Business Studies.

**ECO 204 Principles of Macro- and Global Economics 3(3-0)**

Introduction to GDP, inflation, unemployment, business cycles, interest rates, money and banking, monetary and fiscal policy, economic growth, international trade for business students. Credit may not be earned in more than one of ECO 201 and ECO 204. This course may be offered in an online format. Prerequisites: ECO 202 or 203, Tier 1 continuing admission to Professional Business Studies.

**ECO 211 Economics of Professional Team Sports 3(3-0)**

Study of the economics and industrial relations systems of professional sports leagues in baseball, football, basketball, and hockey in North America.



**ECO 222QR Behavioral Economics 3(3-0)**

*Examines the roles of self-interest, altruism, expectations and information in individual and group decision-making. In-class experiments simulate market behavior and test theoretical predictions. Quantitative Reasoning. (University Program Group III-A: Behavioral Sciences)*

**ECO 230 Women in the Economy 3(3-0)**

A study of the past and present role of women in the economy, as workers, both inside and outside the labor market. Identical to WGS 230. Credit may not be earned in more than one of these courses.

**ECO 266 Economics of Poverty and Discrimination 3(3-0)**

Economic analysis of the causes of poverty and alternative government solutions. Discrimination in education, housing and labor markets and their relationship to other social problems.

**ECO 281 Economic Development of the Pacific Rim 3(3-0)**

*Rapid development of Pacific Rim economies and its impact on our economy is studied. The roles of history and culture in economic policy are studied. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**ECO 285 Statistical Methods in Economics 3(3-0)**

Fundamental statistical techniques emphasizing application of statistical methods to economic analysis, index numbers, seasonal and cyclical variation in economic data. Prerequisites: ECO 201 or 204; math competency.

**ECO 301 Environmental Economics 3(3-0)**

Basic economic understanding of environmental/ecological problems arising from a free enterprise system. Economists' solutions presented without advanced economic theory or mathematical computation. Recommended: ECO 202 or 203.

**ECO 306 Money and Banking 3(3-0)**

The nature of money and credit; history, structure, and functions of banking institutions, with emphasis upon Federal Reserve System and questions of appropriate public policy. Prerequisites: ECO 201 or 204; ECO 202 or 203.

**ECO 310 American Economic Development 3(3-0)**

Realistic interpretation, with emphasis on economic change and its significance in social, cultural, and political evolution. Recommended: ECO 201 or ECO 202 or ECO 203.

**ECO 315 Economics of Immigration 3(3-0)**

The economics of immigration: U.S. immigrant characteristics, impact of immigration on the U.S. economy, and public policies towards immigration. Prerequisite: ECO 202 or 203.

**ECO 320 European and Asian Economic History 3(3-0)**

Realistic introduction to the diverse economic experiences of advanced European and Asian nations from the British industrial revolution to the present. Recommended: ECO 201 or ECO 202 or ECO 203.

**ECO 350 Law and Economics 3(3-0)**

Theory and application of analytical tools of law and of economics in an integrative approach to both subjects. Identical to BLR 350. Credit may not be earned in more than one of these courses. Prerequisites: BLR 202 or BLR 235, ECO 202 or ECO 203.

**ECO 360 Public Economics 3(3-0)**

Appropriate and actual roles of government in market economies, and how government influences the use of resources and distribution of income. Prerequisites: ECO 202 or ECO 203.

**ECO 365 Intermediate Microeconomic Theory 3(3-0)**

An intensive treatment of the theories of supply and demand, consumer and producer behavior, market structure, and other micro theories and issues. Prerequisite: ECO 202 or 203.

**ECO 370 Intermediate Macroeconomic Theory 3(3-0)**

National income accounting; income, employment, interest rate and inflation theory and policy; theory and problems of economic growth. Prerequisites: ECO 201 or 204; ECO 202 or 203.

**ECO 372 International Economics 3(3-0)**

International trade theory and practices, exchange rates and balance of payments, and international monetary arrangements. Prerequisites: ECO 201 or 204; ECO 202 or 203.

**ECO 375 Economics of Cities and Regions 3(3-0)**

Elementary theories of regional economic analysis used in solving specific problems such as pollution, housing, segregation, and conservation. Emphasizes urban regions. Prerequisites: ECO 201 or ECO 202 or ECO 203.

**ECO 380 Comparative Economic Systems 3(3-0)**

Comparative study of economic institutions in a world of politicoeconomic change. An analysis of capitalism, fascism, socialism, and communism. Recommended: ECO 201 or ECO 202 or ECO 203.

**ECO 381 Patterns of Economic Development 3(3-0)**

A study of the problems, processes, and theories of economic change in today's less developed countries. Recommended: ECO 201 or ECO 202 or ECO 203.

**ECO 385 Introduction to Econometrics 3(3-0)**

Introduction to the theory and practice of linear regression analysis in economics focusing on single equation methods. Extensive computer applications. Prerequisites: ECO 202 or 203; ECO 285 or STA 282 or STA 382.

**ECO 397 Special Studies in Economics 1-6(Spec)**

Experimental courses to cover topics of special interest not covered by courses in the regular curriculum. Prerequisite: Varies with topic and instructor.

**ECO 410 Government and Business 3(3-0)**

Relations of industry, especially corporations, to government, antitrust laws and their enforcement; public policy toward business; problems of unfair competition; patents and trademarks. Prerequisites: ECO 202 or 203.

**ECO 411 The Economics of Slavery in the U.S. 3(3-0)**

The economic indictment of southern slavery; new challenges to this indictment; implications of the existence of southern slavery for present economic policy decisions. Recommended: ECO 201 or 202.

**ECO 414 Labor Economics 3(3-0)**

Labor market operations and wage determination; human capital investment; labor market discrimination; wage differentials; impact of unionization on wages; collective bargaining. Prerequisite: ECO 202 or 203.

**ECO 425 The Economics of Industrial Organization 3(3-0)**

Concepts, theories, and evidence which relate industry structure to behavior and performance of firms. Provides a basis for evaluating public policy. Prerequisites: ECO 202 or ECO 203. Recommended: ECO 201 or ECO 204.

**ECO 440 Managerial Economics 3(3-0)**

Application of microeconomic theory to a variety of management decisions such as internal resource allocation, pricing, market entry and the boundaries of the firm. Prerequisite: ECO 202 or ECO 203.

**ECO 490 Economics Internship 1-3(Spec)**

Provides a bridge between academic training and work experience. Allows application of principles of economics to a job and job experiences to classes. CR/NC only. Prerequisites: 56 semester hours completed; signed economics major or minor; 12 credit hours of economics (ECO 201 or ECO 204, ECO 202 or ECO 203 and at least one course 300 level or above); overall GPA of 2.75 or higher; prior approval of departmental supervisor.

**ECO 503 Seminar in Urban Economics 3(3-0)**

Economic aspects of urban regions; their growth; household location; pollution; poverty. Solutions-oriented discussion of urban problems. Complements ECO 504. Recommended: ECO 375.

**ECO 508 Monetary Theory 3(3-0)**

Further development of theories of money supply, money demand, the options of monetary policy, and the effects of monetary policy on the economy. Prerequisite: ECO 306 or 370; or graduate standing in Economics.

**ECO 515 Collective Bargaining and Labor Law 3(3-0)**

Development of various phases of labor law, especially under statutes such as the Wagner Act, Taft-Hartley Act, and Landrum-Griffin Act. Prerequisite: ECO 201 or ECO 204; ECO 202 or 203. CR/NC option available.

**ECO 526 Research in Economic History Post 1870 3(3-0)**

In-depth examination of specific topics in early-to mid-20th century economic history and instruction in how to conduct and read scholarly research in economics. Prerequisite: ECO 365, 370, MTH 132, STA 282, or graduate standing in economics.

**ECO 532 Economic Forecasting 3(3-0)**

Nature and causes of economic fluctuations. Methods of predicting price levels and economic activity. Prerequisites: ECO 201 or ECO 204; ECO 202 or ECO 203.

**ECO 572 International Monetary Economics 3(3-0)**

International monetary and financial markets are studied. Topics include exchange rate policy, international Capital Flow and purchasing power parity theory. Prerequisites: ECO 372.

**ECO 585 Econometrics 3(3-0)**

Thorough treatment of statistical estimation methods and their properties for simultaneous equation systems. Also includes discussions of types of systems, solution methods and identification. Prerequisites: STA 580 and MTH 132; or graduate standing in Economics.

**ECO 586 Econometric Applications 3(3-0)**

Economic applications and empirical implementation and interpretation of econometric techniques. Extensive computer applications. Prerequisites: BUS 300 or STA 382; or graduate standing in Economics.

**ECO 590 Seminar Readings 1-3(Spec)**

This course allows for independent, in-depth explorations of economics topics. Prerequisite: Permission of instructor. Recommended: 12 hours of ECO courses with B average or graduate standing in Economics.

**ECO 591 Seminar Research Studies 1-3(Spec)**

Independent study on special problems for majors and minors in economics and graduate students in economics. Prerequisite: Permission of instructor. Recommended: Nine hours of 300-to 500-level ECO courses or graduate standing in Economics.

**ECO 597 Special Studies in Economics 1-3(Spec)**

Experimental courses to cover material of special interest to both undergraduates and graduates not covered by courses in the regular curriculum. Prerequisite: permission of instructor.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**ECO 600 Introduction to Advanced Economic Analysis 3(3-0)****ECO 601 Advanced Environmental Economics 3(3-0)****ECO 603 Economic Effects of Urbanization and Technology 3(3-0)****ECO 606 Seminar in Economic History 3(3-0)****ECO 610 Seminar in Economic Thought 3(3-0)****ECO 614 Seminar in Labor Economics 3(3-0)****ECO 616 Advanced Microeconomic Theory 3(3-0)**

ECO 618 Seminar in Health Economics 3(3-0)  
 ECO 619 Continuing Registration for Final Research Project 1(1-0)  
 ECO 620 Advanced Macroeconomic Theory 3(3-0)  
 ECO 622 Seminar in Economic Growth and Development 3(3-0)  
 ECO 625 Firm Behavior and Game Theory 3(3-0)  
 ECO 630 Comparative Economic Systems 3(3-0)  
 ECO 635 Fundamentals of Mathematical Economics 3(3-0)  
 ECO 640 Special Topics in Economic Issues 3-6(Spec)  
 ECO 646 Advanced Topics in Microeconomic Theory 3(3-0)  
 ECO 650 American Financial Institutions 3(3-0)  
 ECO 655 Seminar in International Economics 3(3-0)  
 ECO 657 Advanced Investment Analysis 3(3-0)  
 ECO 660 Public Finance and Fiscal Policy 3(3-0)  
 ECO 670 Research Methods in Economics 3(3-0)  
 ECO 690 Independent Research 1-3(Spec)  
 ECO 798 Thesis 1-6(Spec)

## EDL - Educational Leadership

See the Department of Counseling, Educational Leadership, and Higher Education for more information.

**EDL 592 Professional Development in Educational Leadership 1-9(Spec)**  
 Identification and study of emerging problems of educational leadership. This course may be offered in an online or hybrid format.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

EDL 600 Research in Educational Leadership 3(3-0)  
 EDL 609 Administration of Volunteer Programs 3(3-0)  
 EDL 610 Grants and Fund Procurement 3(3-0)  
 EDL 611 Using Research for Leading School Improvement 3(3-0)  
 EDL 615 Educational Technology for Administrators 3(3-0)  
 EDL 619 Continuing Registration for Final Research Project 1(1-0)  
 EDL 620 Administration Within Diverse Populations 3(3-0)  
 EDL 622 Adult Literacy and Society 3(3-0)  
 EDL 624 Planning for Instruction in Nontraditional Settings 3(3-0)  
 EDL 645 Charter School Leadership 3(3-0)  
 EDL 650 Professional Studies: Special Topics 1-6(Spec)  
 EDL 652 Global Education Studies 3-12(Spec)  
 EDL 656 Public School Law 3(3-0)  
 EDL 658 Teacher Leadership 3(3-0)  
 EDL 660 Principles of Educational Administration 3(3-0)  
 EDL 661 School and Community Relations 3(3-0)  
 EDL 662 School Business Administration 3(3-0)  
 EDL 663 Human Resources Administration 3(3-0)  
 EDL 667 Administration of Community Education 3(3-0)  
 EDL 669 Rural School Leadership 3(3-0)  
 EDL 670 The Principalship 3(3-0)  
 EDL 675 Administration of Special Education 3(3-0)  
 EDL 678 Emerging Issues and Reform Efforts in Educational Leadership 3(3-0)  
 EDL 687 Independent Study 1-6(Spec)  
 EDL 688 Independent Study 1-6(Spec)  
 EDL 689 Independent Study 1-6(Spec)  
 EDL 690 Administration of School Curriculum 3(3-0)  
 EDL 694 Educational Leadership Capstone 3(3-0)  
 EDL 695 Readings in Educational Leadership 1-3(Spec)  
 EDL 699 Leadership Internship 1-15(Spec)  
 EDL 700 Educational Research Design 3(3-0)  
 EDL 710 Action Research 3(3-0)  
 EDL 720 Survey Research Methods 3(3-0)  
 EDL 731 Strategic Planning 3(3-0)  
 EDL 745 Administration of the School District 3(3-0)  
 EDL 750 Professional Studies: Special Topics 1-6(Spec)  
 EDL 751 Program Evaluation and Review 3(3-0)  
 EDL 752 Social Justice in Global Studies Education 1-12(Spec)  
 EDL 760 Leadership Theory and Practice 3(3-0)  
 EDL 761 School and Community Relations for the District Leader 3(3-0)  
 EDL 765 Organizational Change in Educational Institutions 3(3-0)  
 EDL 766 Advanced Educational Law 3(3-0)  
 EDL 767 Public School Finance 3(3-0)  
 EDL 768 Advanced Higher Education Law 3(3-0)  
 EDL 769 Negotiations in Education 3(3-0)  
 EDL 770 Advanced Elementary School Leadership 3(3-0)

EDL 772 Advanced Administration of Secondary Schools 3(3-0)  
 EDL 773 Instructional Supervision and Leadership 3(3-0)  
 EDL 774 Women in Education 3(3-0)  
 EDL 775 PK-12 Educational Policy 3(3-0)  
 EDL 780 District Level Leader Internship 1-15(Spec)  
 EDL 790 Critical Issues: Elementary School Leadership 3(3-0)  
 EDL 792 Critical Issues: Administration of Secondary Schools 3(3-0)  
 EDL 793 District Curriculum and Instructional Supervision 3(3-0)  
 EDL 797 Field Study 1-6(Spec)  
 EDL 798 Thesis 1-6(Spec)  
 EDL 800 Qualitative Research in Educational Leadership 3(3-0)  
 EDL 801 Quantitative Analysis in Educational Leadership 3(3-0)  
 EDL 815 Ethical Leadership 3(3-0)  
 EDL 816 Social Justice in Education 3(3-0)  
 EDL 820 Critical Perspectives of Development Theory 3(3-0)  
 EDL 825 Culture of Educational Organizations 3(3-0)  
 EDL 830 Educational Foundations of Philosophy 3(3-0)  
 EDL 855 Organizational Culture and Change in Educational Institutions 3(3-0)  
 EDL 860 Organizational Theory in Educational Institutions 3(3-0)  
 EDL 870 Issues in Educational Leadership 3(3-0)  
 EDL 880 Doctoral Internship 3-6(Spec)  
 EDL 886 Advanced Problem Solving in Educational Leadership 3(3-0)  
 EDL 890 Doctoral Proseminar: Writing and Inquiry 3(3-0)  
 EDL 897 Dissertation Colloquium 3(3-0)  
 EDL 898 Dissertation 1-15(Spec)  
 EDL 899 Doctoral Seminar 3-6(Spec)  
 EDL 900 Advanced Qualitative Analysis in Educational Leadership 3(3-0)  
 EDL 901 Advanced Quantitative Analysis in Educational Leadership 3(3-0)

## EDU - Teacher Education

See the Department of Teacher and Special Education for more information.

**EDU 107 Exploring Education: Teaching as a Profession 3(3-1)**

An introductory course to assist prospective educators with the opportunity to explore teaching, including ten hours of clinical experience outside of class time. May be offered as Writing Intensive. Students are required to receive a B or better in this course.

**EDU 210 Adolescent Development and Learning for Secondary Teachers 3(3-0)**

Study of the basic principles of learning, adolescent cognitive and socio-emotional development. Prerequisites: EDU 107 with a B or better. (University Program Group III-A: Behavioral Sciences)

**EDU 255 Designing Learning Environments 3(3-0)**

This course ensures that teacher candidates possess the understandings and skills necessary to design and co-construct classrooms that maximize learning for all students. Students are required to receive a C+ or better in this course. Prerequisites: EDU 107 with a B or better.

**EDU 280 Education of Children 3(3-0)**

Growth and development of the child, prenatal to adolescent. Includes application to educational settings. Prerequisite: EDU 107. Recommended: Sophomore standing.

**EDU 290 Technology in Education 3(3-0)**

Students will examine technology issues that affect education, develop technological skills to organize, curate, collaborate, and communicate information, and create digital artifacts. May be offered as Writing Intensive.

**EDU 293 Educational Psychology for Elementary Education 3(Spec)**

Principles of learning, cognitive development, motivation, behavior, and social-emotional development in children as related to teaching. C+ or better in this course is required. Prerequisite: Completion of EDU 107 with a B or better.

**EDU 320 Elementary Mathematics Methods 3(3-0)**

Objectives, content, materials, organization, and methods of teaching mathematics in the elementary school. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education Program; EDU 280 or HDF 100 or PSY 220 [General Education Students take EDU 280 or HDF 100; Special Education Majors must take PSY 220]; EDU 290, 393; MTH 151. Co-requisites: EDU 330, 343, 345; EDU/MLE 361. Pre/Co-requisites: MTH 152.

**EDU 325 Middle Level and High School Teaching Methods 3(3-0)**

Prepares future secondary teachers to plan and deliver effective, learner-centered, developmentally appropriate, and culturally responsive instruction that provides a safe and caring classroom climate for all students. Students are required to receive a C+ or better in this course. May be offered in an online format. Prerequisites: Admission to Teacher Education. Pre/Co-Requisite: EDU 310 (completed with a C+ or better).

**EDU 330 Foundations of Reading Instruction 3(3-0)**

Materials, organization, and methods of teaching reading in PK-6 classroom to address the Michigan and national literacy standards and benchmarks. Students are required to receive a C+ or better in this course. Prerequisites: EDU 107.

**EDU 335 Early Literacy 3(3-0)**

Analysis of literacy development from birth through primary grades. This course may be offered in an online format. Prerequisites: EDU 330 or HDF 303.

**EDU 341 Word Study and Fluency 3(3-0)**

Research-based instructional approaches and strategies for explicit instruction in phonemic awareness, phonics, spelling, vocabulary, and reading fluency. This course may be offered in an online format. Prerequisites: EDU 330.

**EDU 342 Word Study and Fluency: PK-3 3(3-0)**

Research-based instructional approaches and strategies for explicit instruction in print concepts, phonological awareness, phonics, spelling, vocabulary, and reading fluency. Prerequisites: EDU 330.

**EDU 343 Social Studies Methods in Elementary Education 3(3-0)**

Objectives, content, materials, organization and methods of teaching social studies in the elementary school. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [General Education Students take EDU 280 or HDF 100; Special Education Majors must take PSY 220]; EDU 290, 393. Co-requisites: EDU 320, 330, 345; EDU/MLE 361.

**EDU 345 Science Methods in Elementary Education 3(3-0)**

Objectives, content, materials, organization, and methods of teaching science in the elementary school. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [General Education Students take EDU 280 or HDF 100; Special Education Majors must take PSY 220]; EDU 290, 393. Co-requisites: EDU 320, 330, 343; EDU/MLE 361.

**EDU 355 Developing Effective Teaching Practices 3(3-0)**

Course focuses on lesson design and assessment with the aim of developing effective teaching practices that will maximize learning for all students. Students are required to receive a C+ or better in this course. Prerequisites: admission to teacher education; EDU 255 and EDU 210 both with a C+ or better.

**EDU 361 Pre-Student Teaching Practicum 2(1-4)**

Pre-service Teachers will gain practical experience through observing, interacting, collaborating, and teaching in a pre K-12 classroom setting. Identical to MLE 361. Credit may not be earned in more than one of these courses. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [General Education Students take EDU 280 or HDF 100; Special Education Majors must take PSY 220]; EDU 290, 393. Co-requisites: EDU 320, 330, 343, 345.

**EDU 362 Mathematics and Reading Practicum 1(0-2)**

Pre-service teachers will gain practical experience through observation, interaction, collaboration, preparation, and delivery of reading and mathematics instruction in a pre K-8 classroom setting. Identical to MLE 362. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Admission to Teacher Education Program; EDU 280 or HDF 100 (students with a major in "teachers of students with emotional impairment" or a major in "teachers of students with cognitive impairment" are required to have SPE 126 and PSY 220); EDU 290, 330, 393. Co-requisites: EDU 320, 431.

**EDU 363 Science and Social Studies Practicum 1(0-2)**

Pre-service teachers will gain practical experience through observation, interaction, collaboration, preparation, and delivery of science and social studies instruction in a pre K-8 classroom setting. Identical to MLE 363. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Admission to Teacher Education Program; EDU 280 or HDF 100 (students with a major in "teachers of students with emotional impairment" or a major in "teachers of students with cognitive impairment" are required to have SPE 126 and PSY 220); EDU 290, 320, 330, 393, 431; EDU/MLE 362. Co-requisites: EDU 343, 345, 495.

**EDU 380WI Interdisciplinary Methods and Pre-Student Teaching (Math & Literacy, PK-6) 6-10(Spec)**

Consists of effective instructional strategies in both math and literacy as well as methods to integrate the content areas in PK-6 classrooms. Course is required semester before student teaching. Students are required to receive a C+ or better in this course. Writing Intensive. Prerequisites: Admission to Teacher Education; EDU 330.

**EDU 381WI Interdisciplinary Methods and Pre-Student Teaching 6(Spec)**

Consists of integrated coursework in Science and Social Studies teaching in 3-6 classrooms. Course is required the semester before student teaching. Students are required to receive a C+ or better in this course. Writing Intensive. Prerequisites: Admission to Teacher Education; EDU 330.

**EDU 431 Corrective Reading in the Classroom 3(3-0)**

Classroom diagnosis of students' reading strengths and weaknesses. Analysis of corrective and remedial techniques. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [General Education Students take EDU 280 or HDF 100; Special Education Majors must take PSY 220]; EDU 290, 320, 330, 343, 345, 393; EDU/MLE 361. Co-requisite: EDU 495.

**EDU 432 Student Teaching Seminar 3(3-0)**

This course reinforces components of MDE teacher preparation and InTasc standards. Students transfer theory to practice while student teaching. Students are required to earn a C+ or better in this course. Prerequisite: Admission to Teacher Education, Student Teaching Application Approval; Co-requisite: EDU 458.

**EDU 433 Global Pre-Student Teaching Elementary Field Experience 1(1-0)**

Preparation for global pre-student teaching elementary field experience. Co-requisites: EDU/MLE 361 or EDU/MLE 362.

**EDU 434 Global Pre-Student Teaching Secondary Field Experience 1(1-0)**

Preparation for global pre-student teaching secondary field experience. Co-requisites: EDU 310, or 325, or 450, or 495.

**EDU 447 Literacy Engagement 3(3-0)**

Understanding and applying literacy engagement theory, practice, and assessments in K-12 classrooms. This course may be offered in an online format. Prerequisite: EDU 330.

**EDU 450 Disciplinary Literacy 3(3-0)**

Study and development of strategies to improve literacy (reading, writing, and thinking for learning) in various disciplines. Students are required to receive a C+ or better in this course. This course may be offered in an online format. Prerequisites: Admission to Teacher Education; EDU 325 (completed with a C+ or better) or MUS 431 or MUS 433.

**EDU 455 Analyzing Teaching to Improve Student Learning 3(3-0)**

Course focuses on lesson design and assessment with the aim of developing effective teaching practices that will maximize learning for all students. Students are required to receive a C+ or better in this course. Prerequisites: Successful completion of EDU 355 and EDU 450 with C+ or better; Co-requisites: SPE 504; and subject-specific pre-student teaching capstone methods course: ENG 560 or GEO 400 or HPE 425 or HST 300 or MTH 460 or MUS 433 or PSC 305 or SCI 400 or TEL 502.

**EDU 458 Student Teaching Internship 9(Spec)**

This is the culminating experience where student teachers observe and gradually assume full teaching responsibilities under the supervision of a PK-12 cooperating teacher. CR/NC only. Prerequisite: Admission to teacher education, Student Teaching Application Approval; Co-requisite: EDU 432.

**EDU 490 Teaching with Distance Learning Technologies 3(3-0)**

Methods and procedures of teaching PreK-12 students in asynchronous and synchronous classrooms. Prerequisites: Admission to Teacher Education; EDU 290; Elementary: EDU 320, 330, 343, 345; Secondary: EDU 325.

**EDU 493 Learning and Evaluation in Elementary Education 3(3-0)**

Theories, purposes, materials, and problems related to learning and the measurement and evaluation of learning. Includes a unit on mental health. Prerequisites: EDU 280 (students with a major in "teachers of students with emotional impairment" or major in "teachers of students with cognitive impairment" are required to have SPE 126 & PSY 220); and at least one of the following: EDU 320, 330. Requires admission to Teacher Education Program.

**EDU 495 Foundations of Education 3(3-0)**

Examines historical events and social bases of American education. Major emphasis is on political, judicial, and legislative activities; social issues; and current policy affecting schools. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education.

**EDU 505 Diagnostic Literacy Assessments and Instruction: K-3 3(3-0)**

Diagnostic literacy assessments will be introduced including appropriate administration, data analysis, and related instructional practices. State literacy assessment certification: MLPP K-3. Prerequisites: EDU 330 or graduate status.

**EDU 506 Principles and Techniques for Individualizing Instruction 3(3-0)**

Examination of individualized instruction and its classroom implications. Prerequisite: EDU 330 or EDU 340.

**EDU 508 Education Workshop 1-6(Spec)**

Identification and study of educational theory, topics and/or issues in contemporary education. Prerequisites: Senior Standing or Graduate Status.

**EDU 515 Managing Classrooms and Learning Environments 3(Spec)**

Engages students with theories and effective practices related to effectively managing classrooms and learning environments. Prerequisite: Admission to Teacher Education Program or graduate status.

**EDU 525 Early Childhood Education 3(3-0)**

Content, methods, materials, and curriculum planning for teaching pre-kindergarten through primary grades. Prerequisites: Junior Standing or Graduate Status.

**EDU 528 Early Literacy and Struggling Readers 3(3-0)**

Analysis of literacy development from preschool through primary grades and related instructional practices for struggling readers in K-12 classrooms. Prerequisites: EDU 330 or graduate standing.

**EDU 531 Assessment, Instruction, and Intervention in Reading 3(3-0)**

Use formal and informal assessment procedures to design and evaluate reading instruction and intervention. Prerequisite: Admission to Teacher Education or graduate status.

**EDU 532 Reading in the Content Areas 3(3-0)**

Emphasizes teaching of literacy strategies in the academic disciplines, focusing on grades 3-8. This course may be offered in an online format. Prerequisites: EDU 330 or graduate status.



**EDU 533 Diagnosis and Treatment of Reading Difficulties 3(2-3)**

Engages students in administering assessments and analyzing data to plan and provide effective literacy instruction. Prerequisites: EDU 330 or graduate standing.

**EDU 537 Knowledge of Diverse Readers, Including Dyslexia 3(3-0)**

Address the knowledge and skill base for teaching reading to diverse readers, including dyslexia. Prerequisite: Admission to Teacher Education or graduate status.

**EDU 538 Integrated Language Arts 3(3-0)**

Integration of listening, speaking, enacting, writing, reading, viewing, and visually representing into a K-8 language arts program and instruction for diverse needs of all learners. This course may be offered in an online format. Prerequisite: EDU 330.

**EDU 540 Literacy Education: Theory and Practice 3(3-0)**

Emphasizes a broad view of literacy within a comprehensive approach and authentic contexts; effective literacy instruction across content, all learners, skill integration, and assessment. This course may be offered in an online format. Prerequisites: EDU 330 or graduate status.

**EDU 542 Integrating Reading, Writing, and Thinking 3(3-0)**

Reinforces the integration of disciplinary knowledge with reading, writing, and thinking strategies. Prerequisites: EDU 330 or graduate standing.

**EDU 545 Literacy for Culturally and Linguistically Diverse Learners 3(3-0)**

Principles and best practices for teaching literacy skills to culturally and linguistically diverse learners in K-12 classrooms. Prerequisites: EDU 330 or EDU 450 or graduate status.

**EDU 566 Independent Study in Elementary Education 1-6(Spec)**

Research or project. Prerequisites: 15 semester hours of professional education and approval of unit coordinator.

**EDU 590 Foundations for Learning, Design, and Technology in Education 3(3-0)**

Integration of technology in classroom instruction and management, with emphasis upon lesson design and evaluation of software, applications, and devices. Prerequisites: EDU 290, junior standing; or graduate status.

**EDU 595 Digital and Media Literacy for Educators 3(3-0)**

The study of digital and media literacy research, theory, and practice focused specifically for those who are instructors in K-12 and higher education. Prerequisites: EDU 290, junior standing; or graduate status.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**EDU 602 Strategies and Techniques for Teaching 3(3-0)****EDU 603 Advanced Reading Diagnosis and Instruction 3(3-0)****EDU 605 History and Trends in Elementary School Curriculum Development 3(3-0)****EDU 606 Secondary Advanced Reading Diagnosis and Instruction 3(3-0)****EDU 607 Communication and Collaboration Strategies for Teacher Leaders 3(3-0)****EDU 608 Projects in Education 1-6(Spec)****EDU 609 History of Education 3(3-0)****EDU 613 Current Educational Issues 3(3-0)****EDU 614 Advanced Educational Psychology 3(3-0)****EDU 615 Survey of Science Education 3(3-0)****EDU 618 The Nature of Science in Science Teaching 3(3-0)****EDU 619 Continuing Registration for Final Research Project 1(1-0)****EDU 620 Problems of Teaching Mathematics in the Elementary School 3(3-0)****EDU 622 Advanced Adolescent Psychology 3(3-0)****EDU 623 Understanding Literacy Research Methods 3(3-0)****EDU 624 Word Study and Vocabulary Development 3(3-0)****EDU 627 Teaching and Learning with Digital Literacies 3(3-0)****EDU 628 Secondary School Programs and Practices 3(3-0)****EDU 629 Reading and Writing Connections 3(3-0)****EDU 630 Organization and Implementation of School Literacy Programs 3(3-0)****EDU 632 Practicum in Literacy Assessment and Intervention 6(Spec)****EDU 633 Clinical Practice in Reading 3(1-4)****EDU 635 Advanced Language Arts Instruction 3(3-0)****EDU 636 Foundations of Classroom Reading and Writing Instruction 3(3-0)****EDU 640 History and Trends in Elementary Social Studies Education 3(3-0)****EDU 641 Literacy in the Disciplines 3(3-0)****EDU 642 Creating Instructional Media 3(3-0)****EDU 643 Instructional Design 3(3-0)****EDU 645 Advanced Science Teaching Methods 3(3-0)****EDU 650 Literacy Coaching and Leadership 3(3-0)****EDU 651 Supervision of Student and Intern Teaching 3(3-0)****EDU 653 Higher Order Web-Mediated Learning 3(3-0)****EDU 655 The Community College 3(3-0)****EDU 658 Practicum in the Community College 3-6(Spec)****EDU 660 Methods of Educational Research 3(3-0)****EDU 662 Applied Educational Measurement and Evaluation 3(3-0)****EDU 670 Reading in the Secondary School II 3(Spec)****EDU 682 Psychology of Child Development 3(3-0)****EDU 687 Independent Study 1-3(Spec)****EDU 688 Independent Study 1-3(Spec)****EDU 689 Independent Study 1-3(Spec)****EDU 698 Thesis 1-6(Spec)****EDU 705 Theory and Practice in Curriculum Development 3(3-0)****EDU 706 Theory and Practice of Instruction 3(3-0)****EDU 707 Issues in Learning, Design, and Technology 3(3-0)****EDU 708 Designing and Implementing Online Learning Experiences 3(3-0)****EDU 709 Innovative Uses of Technology 3(3-0)****EDU 710 Capstone Project in Learning, Design, and Technology 3(3-0)****EDU 730 Seminar: Issues in Literacy 3(3-0)****EDU 755 Advanced Research Design and Interpretation 3(3-0)****EDU 765 Seminar in Curriculum Problems 3(3-0)****EDU 770 Practicum in Systematic Curriculum Development 3(3-0)****EDU 776 Seminar: Issues in Education 3(3-0)****EDU 780 Master of Arts Capstone Experience 3(3-0)****EDU 800 Educational Technology Research 3(3-0)****EDU 801 Qualitative Research in Educational Technology 3(3-0)****EDU 802 Quantitative Research in Educational Technology 3(3-0)****EDU 807 Seminar: Learning Tools in Education Technology 3(3-0)****EDU 808 Blended and Online Learning 3(3-0)****EDU 810 Grant Writing 3(3-0)****EDU 811 Motivation in Online and Blended Learning 3(3-0)****EDU 814 Differentiated Instruction in Online Learning 3(3-0)****EDU 842 Mobile Learning 3(3-0)****EDU 853 Evolving Internet Learning 3(3-0)****EDU 862 Data Driven Decision Making 3(3-0)****EDU 870 Higher Order Learning and New Literacies 3(3-0)****EDU 898 Dissertation 1-18(Spec)****EES - Earth and Ecosystem Science**

For more information, contact the College of Science and Engineering or see the Graduate Studies Bulletin.

**EES 619 Continuing Registration for Final Research Project 1(1-0)****EES 701 Earth and Ecosystem Science Colloquium 3(3-0)****EES 703 Advances in Earth and Ecosystem Science 3(3-0)****EES 790 Special Topics in Earth and Ecosystem Science 1-6(Spec)****EES 796 Directed Research in Earth and Ecosystem Science 1-30(Spec)****EES 899 Dissertation 1-12(Spec)****EGR - Engineering**

See the School of Engineering and Technology for more information.

**EGR 120 Introduction to Engineering 3(2-2)**

A general introduction to engineering with an emphasis on problem solving, engineering tools, engineering design processes, and teamwork. Pre/Co-requisite: One of the following: MTH 130, 132, 133.

**EGR 190QR Digital Circuits 3(3-0)**

This course introduces Boolean algebra, logic functions, truth tables, combinational circuits, sequential circuits, sensors, actuators, microprocessors. Quantitative Reasoning. Prerequisites: MTH 130 with a grade of C- or better; or Pre/Co-requisite: MTH 132 or MTH 133; Pre/Co-requisite: EGR 120.

**EGR 200 Computer Aided Problem Solving for Engineers 3(2-2)**

Engineering problem solving involving circuit elements, batteries, one-link robots, two-link robots, springs, and cables using physical experiments, mathematics, MATLAB and/or equivalent. Prerequisites: Cumulative GPA of 2.5 or higher; permission of E&T advisor. Pre-requisite/Co-requisite: MTH 132.

**EGR 201 Introduction to Environmental Engineering 3(3-0)**

Introduction to principles of environmental engineering with an emphasis on water and atmospheric quality; water and wastewater engineering; solid and hazardous waste engineering; pollution prevention. Prerequisites: MTH 132 or 133; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 202 Environmental Microbiology for Engineers 3(3-0)**

Introduction to roles of microorganisms in natural and engineered systems. Energetics, growth and enzyme kinetics; disinfection, water and wastewater microbiology; biodegradation and bioremediation. Prerequisites: BIO 105QR; MTH 132; permission of E&T advisor; cumulative GPA of 2.5 or higher.



**EGR 203 Water Chemistry 3(3-0)**

Basic concepts from general, physical, and analytical chemistry as they relate to environmental engineering. Equilibrium and kinetics, acid-base chemistry, redox reactions, dissolution and chemical precipitation. Prerequisites: CHM 131 and CHM 132 or CHM 141 and CHM 142, MTH 132 or 133 with a C- or better; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 251 Engineering Statics 3(3-0)**

Free body diagrams, equilibrium of particles and rigid bodies, internal forces in structures and beams, friction, centroids and moments of inertia. Prerequisites: MTH 132 with a grade of C- or better; PHY 145 with a grade of C- or better; permission of E&T advisor; cumulative GPA of 2.5 or higher. Pre/Co-requisite EGR 120.

**EGR 253 Engineering Dynamics 3(3-0)**

Fundamentals of engineering dynamics covering kinematics and kinetics of particles and rigid bodies. Prerequisites: EGR 251 with grade of C- or better; MTH 133 with a grade of C- or better; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 255 Strength of Materials 3(3-0)**

Fundamentals of mechanics of materials including mechanical stress and strain, deformations, torsion, bending and shearing stresses, and deflections of beams. Prerequisites: EGR 251 with a grade of C- or better; MTH 133 with a grade of C- or better; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 290 Circuit Analysis I 3(3-0)**

Introduction to charge, current, voltage, power, resistive circuits, DC circuit analysis techniques, inductance and capacitance. DC circuit instrumentation including breadboards, multimeters and power supplies. Prerequisites: MTH 133 with a grade of C- or better; PHY 145 with a grade of C- or better; cumulative GPA of 2.5 or higher; permission of E&T advisor. Pre/Co-requisite: EGR 120; PHY 146.

**EGR 292 Circuit Analysis II 3(3-0)**

First- and second-order circuits, sinusoidal steady-state analysis, frequency response, complex power, magnetically coupled networks and polyphase circuits. Prerequisites: EGR 290 with a grade of C- or better; cumulative GPA of 2.5 or higher; permission of E&T advisor. Pre/co-requisite: MTH 232 or MTH 334.

**EGR 298 Microelectronic Circuits I 3(3-0)**

Introduction to diode, bipolar and MOS transistors and their circuit models; analysis and design of bipolar, CMOS and Op-Amp based amplifier circuits. Prerequisites: EGR 290 with a grade of C- or better; permission of E&T advisor; signed engineering major; cumulative GPA of 2.5 or higher.

**EGR 300 Engineering Economic Analysis 3(3-0)**

An introduction to financial and economic decision-making for engineering projects, with an emphasis on problem solving, life cycle costs, and the time value of money. Prerequisites: MTH 132 or 133; one of: STA 282, 382, 392; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 304 Biological Processes in Environmental Engineering 3(3-0)**

Fundamentals of biological processes commonly used in water and wastewater treatment. Material and energy balances of biological reactors, biological treatment processes; nutrient removal; sludge digestion. Prerequisites: EGR 202 with a grade of C- or better; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 305 Physicochemical Processes in Environmental Engineering 3(3-0)**

Fundamentals of physical and chemical processes commonly used in water and wastewater treatment. Disinfection, oxidation, coagulation and flocculation, sedimentation, filtration, ion exchange, flotation, adsorption. Prerequisites: EGR 203 with a C- or better; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 306 Environmental Engineering Laboratory 3(1-4)**

Laboratory methods in environmental engineering applications. Analysis of selected chemical and microbiological water quality parameters. Experiments on selected unit operations and processes of environmental engineering. Prerequisites: EGR 304, 305; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 355 Engineering Materials 3(3-0)**

Fundamentals of engineering materials including metals, alloys, ceramics, polymers, and composites. Introduction of materials processing, properties and selection, and their role in design. Prerequisites: CHM 131 or 141; EGR 251 with grade of C- or better; MTH 132 with grade of C- or better; PHY 146 with grade of C- or better; cumulative GPA of 2.5 or higher; permission of E&T advisor; signed engineering major.

**EGR 356 Thermodynamics I 3(3-0)**

Fundamentals of engineering thermodynamics including general energy concepts, first and second laws of thermodynamics, entropy, processes, power cycles and refrigeration cycles. Prerequisites: CHM 131 or 141; EGR 251 with grade of C- or better; MTH 133 with grade of C- or better; PHY 146 with grade of C- or better; cumulative GPA of 2.5 or higher; permission of E&T advisor; signed engineering major.

**EGR 358 Fluid Mechanics 3(3-0)**

Study of the principles of fluid statics and dynamics including Bernoulli's equation, control volume analysis, similitude, dimensional analysis, viscous flow, and flow over immersed bodies. Prerequisites: EGR 253; MTH 133 with grade of C- or better; permission of E&T advisor; signed engineering major; cumulative GPA of 2.5 or higher.

**EGR 359 Machine Design I 3(3-0)**

The study of relative motion of machine and mechanism parts, forces acting on them, and motions resulting from these forces. Prerequisites: EGR 253; IET 154; signed engineering major; permission of E&T advisor; cumulative GPA of 2.5 or higher. Pre/co-requisite: MTH 233.

**EGR 360 Solid Mechanics Laboratory 3(1-4)**

Development of experimental skills and measurement techniques in the areas of material behavior, static and dynamic stress and strain analysis. Prerequisites: EGR 253, 255; PHY 175 with grade of C- or better; permission of E&T advisor; signed engineering major; cumulative GPA of 2.5 or higher. Pre/Co-Requisite: EGR 355.

**EGR 371 Robotics and Automation 3(2-2)**

An introduction to the theory and application of robotics including robot fundamentals, kinematics, trajectory planning, actuators, sensors, and industrial robot programming. Prerequisites: CPS 180 or EGR 200; EGR 251 or 290; MTH 232 or MTH 233, 334; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 375 Mechatronics 3(3-0)**

Design and integration of systems that include both mechanical and electrical components. Interdisciplinary study in engineering design and prototyping, sensors, actuation, and microprocessor programming. Prerequisites: EGR 200 or CPS 180; EGR 251 or 290 or IET 279; cumulative GPA of 2.5 or higher; permission of E&T advisor.

**EGR 377 Engineering Prototypes 3(2-2)**

Exploration of basic elements of NC coding and programming, CNC machine set up, elements of CAM and prototype selection and production. Credit may not be earned in both EGR 377 and IET 377. This course may be offered in an online format. Prerequisites: IET 154, EGR 255; cumulative GPA of 2.5 or higher; permission of E&T advisor.

**EGR 388 Introduction to Electromagnetics 3(3-0)**

A study of static and time-variant electric and magnetic fields, plane waves, guided waves, transmission line theory, radiation and antennas. Prerequisites: MTH 232 or MTH 233, 334; MTH 233 with a grade of C- or better; PHY 146 with a grade of C- or better; cumulative GPA of 2.5 or higher; permission of E&T advisor.

**EGR 390 Computer System Design using HDL 3(3-0)**

Review of combinational and sequential circuits, digital functional units, micro-operations and register transfers. Memory organization. Datapath and control units. Verilog and VHDL hardware description languages. Prerequisites: EGR 190 with a grade of C- or better; permission of E&T advisor; cumulative GPA of 2.5 or higher. Pre-requisite/Co-requisite: EGR 396.

**EGR 391 Signal and System Theory 3(3-0)**

Continuous and discrete-time linear systems, time and frequency domain analysis of signals and systems, Laplace, Fourier and z-transforms. Applications to problems in electrical engineering. Prerequisites: EGR 292; cumulative GPA of 2.5 or higher; permission of E&T advisor.

**EGR 392 Microelectronic Circuits II 3(3-0)**

Design and analysis of electronics circuits including current mirrors, cascode amplifiers, differential amplifiers, feedback amplifiers, amplifier frequency response, and analog filters. Prerequisites: EGR 298; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 393 Circuit Lab 3(2-2)**

Basic experimentation consistent with the theory in EGR 190, EGR 290 and EGR 292. Use of laboratory equipment to investigate electrical and digital circuits. Prerequisites: EGR 190; cumulative GPA of 2.5 or higher; permission of E&T advisor. Pre/Co-Requisite: EGR 292.

**EGR 394 Computer Circuit Simulation 3(2-2)**

This course reinforces basic circuit analysis principles using computer software and teaches students various computer circuit analysis and design techniques. Prerequisite: EGR 292; cumulative GPA of 2.5 or higher; permission of E&T advisor. Pre/Co-requisite: EGR 392.

**EGR 396 Microprocessor Fundamentals 3(3-0)**

Introduction to architecture, operation and application of microprocessor and microcontroller systems with hands-on activities during the course. Prerequisites: CPS 180 or EGR 200; EGR 190 with grade of C- or better; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 397 Special Topics in Engineering 1-6(Spec)**

Study of selected engineering topics not included in a regular undergraduate course. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisites: See class schedule; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 398 Microelectronics and Computer Lab 3(2-2)**

Laboratory exploration of semiconductor devices, discrete and integrated amplifiers; feedback; introduction to microcontroller and microprocessor systems, programming the microprocessor development board using assembly language programming. Prerequisites: EGR 393, cumulative GPA of 2.5 or higher; permission of E&T advisor. Pre/Co-Requisites: EGR 392, EGR 396.

**EGR 407 Water and Wastewater Engineering 3(3-0)**

Synthesis of environmental engineering fundamentals into an integrated system design for treatment of drinking water for human use and wastewater for discharge into receiving environments. Prerequisites: EGR 304, 305; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 408 Water Resources Engineering 3(3-0)**

Fundamentals and applications of water resources engineering. Open-channel flow; pipe networks; hydrologic techniques; surface water and ground-water supplies; water demand; and development of water resources. Prerequisites: EGR 358; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 409 Solid and Hazardous Waste Engineering 3(3-0)**

Engineering design, planning, and analysis of problems associated with waste minimization, storage, collection, processing, and disposal of solid and hazardous wastes. Recycling and reuse options. Prerequisite: EGR 304, 305; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 410 Sustainable Engineering 3(3-0)**

Review of sustainable engineering concepts and methods. Sustainability, pollution prevention audit; life-cycle, carbon footprint assessment; green purchasing; environmental management systems; sustainable waste management; industrial symbiosis. Prerequisites: MTH 132 or MTH 133 with a C- or better; junior standing; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 437 Directed Research in Engineering 1-3(Spec)**

Project research under guidance of a faculty advisor to focus on a topic of current interest. Self-guided readings, analysis, computer simulations and/or experimental techniques. Prerequisite: Permission of instructor; cumulative GPA of 2.5 or higher.

**EGR 456 Thermodynamics II and Heat Transfer 3(3-0)**

Continuation of engineering thermodynamics and fundamentals of heat transfer. Topics covered include combustion and gas mixing, heat exchangers, heat conduction, convection, and radiation. Prerequisites: EGR 356, 358; MTH 233; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 458 Measurement and Instrumentation Laboratory 3(1-4)**

Theory and application of mechanical measurements, instrumentation, and computer-based data acquisition. Prerequisites: EGR 190, 355; EGR 360 or CHM 349; STA 392; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 459 Machine Design II 3(3-0)**

Theories of static and dynamic failure, fatigue design, and design of mechanical elements such as gears, shafts, bearings, fasteners, welded joints. Prerequisites: EGR 255, 355, 359; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 460 Thermal Fluids Laboratory 3(1-4)**

Application of theory, techniques, and experimental skills to physical equipment and data acquisition systems in the areas of fluid flow, thermodynamics, and heat transfer. Prerequisites: EGR 358; permission of E&T advisor; cumulative GPA of 2.5 or higher. Pre/co-requisite: EGR 456.

**EGR 477 Finite Element Analysis 3(3-0)**

Mathematical modeling and formulation techniques of finite element equations. Solid modeling and meshing. Solution strategies with applications in solid mechanics, fluid flow, and heat transfer. Prerequisites: EGR 255, 355; IET 154; MTH 232 or MTH 223, 334; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 479 Fracture and Fatigue Analysis 3(3-0)**

Fracture mechanics and fatigue crack nucleation and propagation, stress intensity factors, fracture toughness and design philosophy concepts. Fracture and fatigue tests. Statistical and reliability analysis. Prerequisites: EGR 255, 355; MTH 233, STA 382; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 480 Digital Integrated Circuit Design with FPGAs 3(3-0)**

Design and implantation of digital circuits using programmable logic devices and field programmable gate arrays (FPGAs). Verilog and VHDL hardware description languages. Prerequisites: EGR 390; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 481 Embedded System Design 3(3-0)**

Introduction to designing microcontroller-based embedded computer systems using assembly and C programs. Hands-on experience on microcontroller operations. Examination of real-time operating systems. Prerequisites: CPS 180 or EGR 200; EGR 398; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 482 Design and Organization of Computer Hardware Systems 3(3-0)**

Structural organization and hardware design of digital computers. Processing and control units, arithmetic algorithms, input-output systems, and memory systems. Analyze high performance architecture. Prerequisites: EGR 396; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 484 Digital Signal Processing 3(3-0)**

Mathematical description of digital signals and systems processing via difference equations, discrete Fourier transform and z-transform. Examination and design of filter design techniques. Prerequisites: EGR 391; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 487 Introduction to VLSI Systems 3(3-0)**

Introduction to CMOS process technologies, custom, and semi-custom design. Design of adders, counters, and arithmetic logic units and introduce current research in the area. Prerequisites: EGR 392; permission of E&T advisor; cumulative GPA 2.5 or higher.

**EGR 489WI Senior Design I 3(Spec)**

First course in the senior capstone design sequence integrating design methods and engineering techniques in the context of a realistic engineering project. Writing Intensive. Labs to be arranged. Prerequisites: Senior standing with a passing grade in EGR 390 and 398; or EGR 306 and 358; or EGR 358, 359 and 360; or IET 365 and 377; or IET 324WI and 458; or a pre/co-requisite of IET 450; cumulative GPA of 2.5 or higher; permission of E&T advisor.

**EGR 490 Computer Data Acquisition and Instrumentation 3(3-0)**

Introduction to data acquisition using A/D converters; fundamentals of transducers; dynamic response; amplifiers; theory of A/D and D/A converters; error analysis-statistics. Prerequisites: EGR 396, STA 382; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 492 Automatic Control Systems 3(3-0)**

Theory and design of automatic control systems including control system characteristics, system performance analysis, system stability analysis, frequency response analysis, and controller design. Prerequisites: EGR 391; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 496 Communication Systems 3(3-0)**

Overview of communication systems, Hilbert transform, analog AM/FM (de) modulation, probability and noise in analog communications, A/D conversion, digital pulse and carrier (de)modulation, introductory information theory. Prerequisites: EGR 391; STA 392; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 497 Special Topics in Engineering 1-6(Spec)**

Study of selected engineering topics presented at an advanced undergraduate level and not included in a regular course. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisites: See class schedule; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**EGR 499WI Senior Design II 3(Spec)**

Second course in the senior capstone design sequence integrating design methods and engineering techniques in the context of a realistic engineering project. Writing Intensive. Must be taken in the semester immediately following EGR 489WI. Labs to be arranged. Prerequisites: EGR 489WI; cumulative GPA of 2.5 or higher; permission of E&T advisor.

**EGR 511 Water Quality Management 3(3-0)**

Water quality standards. Indicators, monitoring and impacts of water quality. Point and non-point sources of water pollution. Water quality protection and improvement. Green infrastructure. Prerequisites: EGR 408 or GEL 308; cumulative GPA of 2.5 or higher; permission of E&T advisor; or graduate standing in a CSE program.

**EGR 512 Air Pollution Engineering 3(3-0)**

Sources and types of air pollutants. Adverse effects on humans and the environment. Transportation and transformation of pollutants in the atmosphere. Methods controlling air pollution. Prerequisites: EGR 305; permission of E&T advisor; cumulative GPA of 2.5 or higher; or graduate standing in a CSE program.

**EGR 553 Mechanical Vibrations 3(3-0)**

Modeling, design, and analysis of mechanical vibrations: natural frequency, damping, excitation, higher order systems, modal analysis, experimental testing, and continuous systems. Prerequisites: EGR 253; MTH 232; CPS 180; or EGR 200; permission of E&T advisor; cumulative GPA of 2.5 or higher; or Graduate Student in Engineering.

**EGR 554 Mechanical Controls 3(3-0)**

Design and analysis of control for mechanical systems, including modeling, transient and steady-state, root locus, frequency response, PID control, and state space. Prerequisites: EGR 253; MTH 232; CPS 180 or EGR 200; permission of E&T advisor; cumulative GPA of 2.5 or higher; or Graduate Student in Engineering.

**EGR 555 Engineering Acoustics 3(3-0)**

Fundamentals of engineering acoustics including use of the wave equation, reflection, transmission and attenuation processes, with introduction of various acoustic applications. Prerequisites: EGR 356, 358; MTH 232; permission of E&T advisor; cumulative GPA of 2.5 or higher; or Graduate student in Engineering.

**EGR 570 Engineering Biomechanics 3(3-0)**

Fundamental mechanics and engineering principles applied to understand biological tissues and systems. Prerequisites: EGR 253, 255, 355; permission of E&T advisor; cumulative GPA of 2.5 or higher; or graduate standing in Engineering.

**EGR 576 Mechanics of Composite Materials 3(3-0)**

Study of composite material mechanics with emphasis on selection, analysis, and use. Includes stiffness and strength theories applied to composite beams and plates. Prerequisites: EGR 255, 355; MTH 232; cumulative GPA of 2.5 or higher; or graduate student in Engineering; permission of E&T advisor.

**EGR 578 Advanced Mechanics of Materials 3(3-0)**

Stress/strain in three dimensions, constitutive laws, failure theories. Advanced beam theories, curved beams, shear deformation, beams on elastic foundations, plates and shells, energy methods. Prerequisites: EGR 255, 355; MTH 233; permission of E&T advisor; cumulative GPA of 2.5 or higher; or graduate student in Engineering.

**EGR 580 Fundamentals of Internet of Things 3(3-0)**

Internet of Things (IoT), protocols and standards, IoT architecture, micro-controller, sensor, actuator interfacing, wired and wireless communication, network interface, edge and cloud computing. This course may be offered in an online or hybrid format. Prerequisites: EGR 398; cumulative GPA of 2.5 or higher; permission of E&T advisor; or graduate standing.

**EGR 585 Wireless Sensor Networks 3(3-0)**

Wireless Sensor Networks (WSN), sensors, node components, operating systems, protocols, simulators, applications, security, and signal processing. This course may be offered in an online or hybrid format. Prerequisites: EGR 398; cumulative GPA 2.5 or higher; permission of E&T advisor; or graduate standing.

**EGR 588 Photonics 3(3-0)**

A study of optical phenomena and its application to engineering problems. The course focuses on electromagnetic and quantum properties of the semiconductor laser. Prerequisite: EGR 388; cumulative GPA of 2.5 or higher; permission of E&T advisor; or graduate student in Engineering.

**EGR 591 CMOS Circuit Design 3(2-2)**

Design and simulation of analog and mixed signal integrated circuits and systems using transistor level differential amplifiers, operational amplifiers, oscillators and data converters. Prerequisites: EGR 292, 392; cumulative GPA of 2.5 or higher; permission of E&T Advisor; or graduate student in Engineering.

**EGR 594 Power Electronics 3(3-0)**

Fundamentals of power electronics including switch-mode DC-DC converters, feedback controllers, rectifiers, semiconductor switches and magnetic circuit in power electronics. Prerequisites: EGR 398; cumulative GPA of 2.5 or higher; or Graduate Student in Engineering; permission of E&T advisor.

**EGR 597 Special Topics in Engineering 1-6(Spec)**

Study of selected engineering topics presented at an advanced undergraduate or beginning graduate level and not included in a regular course. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisites: See class schedule; permission of E&T advisor; cumulative GPA of 2.5 or higher or graduate standing in MS in Engineering program.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**EGR 600 Advanced Engineering Analysis 3(3-0)****EGR 601 Advanced Engineering Experimentation 3(2-2)****EGR 637 Directed Research in Engineering 1-6(Spec)****EGR 685 Seminar: Current Topics in Engineering 1-3(Spec)****EGR 697 Special Topics in Engineering 1-6(Spec)****EGR 791 Independent Research in Engineering 1-6(Spec)****EGR 798 Thesis Research 1-6(Spec)**

## ELI - English Language Institute

*Contact the College of Liberal Arts and Social Sciences for more information.*

**ELI 041 Basic Listening and Speaking 5(5-3)**

An intensive beginning-level ESL listening and speaking class for non-native speakers enrolled in the English Language Institute at the low-beginning level. This course may be offered in an online format. CR/NC only. Prerequisite: English Language Institute approval.

**ELI 042 Basic Reading and Writing 4(4-4)**

A low-beginning course in composition and reading skills for international students with focus on sentence and short paragraph development. For intensive-level ELI students. This course may be offered in an online format. CR/NC only. Prerequisite: English Language Institute approval.

**ELI 043 Basic Word Studies and Grammar 3(3-1)**

Development of beginning-level ESL vocabulary and grammar through the study of basic survival themes. For intensive-level ELI students. This course may be offered in an online format. CR/NC only. Prerequisite: English Language Institute approval.

**ELI 051 Listening, Speaking, and Note-taking I 5(5-3)**

An intensive English listening, speaking, and note-taking class for non-native speakers enrolled in the English Language Institute at the high-beginning level. CR/NC only. This course may be offered in an online format. Prerequisites: English Language Institute Approval.

**ELI 052 Reading and Writing I 4(4-4)**

A high-beginning composition and reading skills course for international students, focusing on vocabulary development, reading and writing fluency, and paragraph development. This course may be offered in an online or hybrid format. CR/NC Only. Prerequisite: English Language Institute approval.

**ELI 053 Grammar for International Students I 3(3-1)**

An intensive English grammar class for non-native speakers enrolled in the English Language Institute at the high-beginning level. This course may be offered in an online or hybrid format. CR/NC Only. Prerequisite: English Language Institute approval.

**ELI 061 Listening, Speaking, and Note-taking II 5(5-3)**

An intensive English listening, speaking, and note-taking class for non-native speakers enrolled in the English Language Institute at the intermediate level. CR/NC only. This course may be offered in an online format. Prerequisites: English Language Institute approval.

**ELI 062 Reading and Writing II 4(4-4)**

An intermediate composition and reading skills course for international students, focusing on vocabulary development, reading and writing fluency, and writing paragraphs and basic essays. This course may be offered in an online or hybrid format. CR/NC Only. Prerequisite: English Language Institute approval.

**ELI 063 Grammar for International Students II 3(3-1)**

An intensive English grammar class for non-native speakers enrolled in the English Language Institute at the intermediate level. This course may be offered in an online or hybrid format. CR/NC Only. Prerequisite: English Language Institute approval.

**ELI 071 Listening, Speaking, and Note-taking III 5(5-3)**

An intensive English listening, speaking, and note-taking class for non-native speakers enrolled in the English Language Institute at the high-intermediate level. This course may be offered in an online format. CR/NC only. Prerequisite: English Language Institute Approval.

**ELI 072 Reading and Writing III 4(4-4)**

A high-intermediate composition and reading skills course for international students, focusing on development of reading and essay writing skills, including an introduction to integrating sources. This course may be offered in an online or hybrid format. CR/NC Only. Prerequisite: English Language Institute approval.

**ELI 073 Grammar for International Students III 3(3-1)**

An intensive English grammar class for non-native speakers enrolled in the English Language Institute at the high-intermediate level. This course may be offered in an online or hybrid format. CR/NC Only. Prerequisite: English Language Institute approval.

**ELI 075 Academic Vocabulary for International Students 1(1-0)**

A high-intermediate/advanced course for non-native speakers of English that focuses on building students' usable academic English vocabulary size and vocabulary-learning strategies. CR/NC Only. This course may be offered in an online format. Prerequisites: English Language Institute approval.

**ELI 080 Basic ESL for International Students 1-12(Spec)**

For non-native speakers of English, this course covers all basic skills of English as a Second Language: speaking, listening, reading, and writing. CR/NC only. Prerequisites: Department permission.

**ELI 094 Writing Seminar for Graduate Students 3(3-0)**

For non-native speakers of English at the graduate level, this course focuses on developing proficiency in the academic styles of writing encountered in graduate studies. CR/NC Only. Prerequisites: TOEFL score of 500-547 (173-210 computer-based TOEFL) and/or placement into ELI 094 on the CMU English Language Institute placement test, or successful completion of ELI 084, or permission of the ELI director. ELI 099

**ELI Writing Workshop 1-4(Spec)**

Writing Center individualized writing workshop for English language learners to be taken with at least one other ELI class. Course may be taken more than once as long as course content is not duplicated; total credit not to exceed four hours. CR/NC Only. Co-requisite: Enrollment in at least one ELI course.

**ELI 181 Listening and Speaking for International Students 4(4-0)**

An advanced speaking and listening course for international undergraduate and graduate students who require further instruction in oral proficiency and aural comprehension skills. This course may be offered in an online or hybrid format. Prerequisite: ELI Department approval.

**ELI 182 Academic Reading Skills for International Students 3(3-0)**

This is a course for non-native speakers of English focusing on developing proficiency in reading for academic purposes through improving reading comprehension, strategies, speed and vocabulary development. This course may be offered in an online or hybrid format. Prerequisites: ELI Department approval.

**ELI 183 Advanced Grammar for International Students 3(3-0)**

An advanced course in English grammar for international students who require further instruction to alleviate problems associated with speaking, writing, reading, and listening tasks. This course may be offered in an online or hybrid format. Prerequisites: ELI Department approval.

**ELI 184 Academic Writing for International Students 3(3-0)**

This is a course for non-native speakers of English at the undergraduate and graduate levels which focuses on developing proficiency in writing English for academic purposes. This course may be offered in an online or hybrid format. Prerequisites: ELI Department approval.



**ELI 198 Freshman Composition for International Students 3(3-0)**

Development of nonfiction writing for non-native English speakers. Students prepare a variety of texts by applying knowledge of composing processes, rhetorical strategies, and textual conventions. This course may be offered in an online format. Satisfies Freshman Composition Competency. Alternative to ENG 101 or ENG 103/198. Prerequisite: English Language Institute departmental approval.

**ELI 199 American Language for International Students: Speech Component 3(3-0)**

Instruction and practice in developing speech communication and listening skills for non-native speakers of English. Satisfies Oral English Competency. Alternate to COM 101. Credit may not be earned in more than one of these courses. Prerequisites: ELI Department approval.

## ENG - English Language and Literature

See the Department of English Language and Literature for more information.

**ENG 101 Introductory Composition 3(3-0)**

Development of nonfiction prose writing skills. Students prepare a variety of texts by applying knowledge of composing processes, rhetorical strategies, and textual conventions. Satisfies Freshman Composition Competency. This course may be offered in an online format. Grade for ENG 101 replaces existing grade in ENG 103 or ELI 198 and credit may only be earned in one of these courses. Recommended: Students may add ENG 299 if they feel they might benefit from additional help with their writing.

**ENG 103 First Year Writing 3(3-0)**

Development of skills in nonfiction prose writing. Small class sizes and substantial individualized support help students gain knowledge of composing processes, strategies, and conventions. With ENG 193, meets university requirements for first-year writing competency; alternative to ENG 101 and ELI 198. Grade for ENG 103 replaces existing grade in ENG 101 or ELI 198 and credit may only be earned in one of these courses. Co-requisite: ENG 193 must be taken simultaneously with ENG 103. Recommended: Students with a Writing Placement score of 57 or lower are encouraged to enroll in ENG 103 and ENG 193.

**ENG 134 Introduction to Literature 3(3-0)**

Examination of the novel, short story, poetry, and drama in a range of cultural and historical contexts. May be offered as Writing Intensive. This course may be offered in an online or hybrid format. (University Program Group I-B: The Arts)

**ENG 141 Comics, Graphic Novels, and Other Illustrated Texts 3(3-0)**

Study of the history and meaning of comics, graphic novels, and other illustrated texts from a literary and cultural perspective. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

**ENG 142 Literary Interpretation of Sport 3(3-0)**

Introduction to the art, history, and literary interpretation of sport. May be offered as Writing Intensive. This course may be offered in an online format. (University Program Group I-B: The Arts)

**ENG 143 Laughing Matters: Comedy and Satire 3(3-0)**

Survey of the history, theory, and cultural function of comedy and satire in literature, film, drama, and other media. This course may be offered as Writing Intensive. May be offered in an online format. (University Program Group I-B: The Arts)

**ENG 144WI Monsters and Their Meanings 3(3-0)**

Examination of the significance of monsters in literature, film, and popular culture in a range of cultural and historical contexts. May be offered in an online format. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**ENG 145 Bestsellers and Prize Winners 3(3-0)**

Uses a range of popular and prizewinning fiction, non-fiction, and poetry to investigate why one work may be a bestseller, and another a critical success. May be offered in an online format. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

**ENG 146WI Race and Racism in American Literature 3(3-0)**

Introduction to diverse American literatures, with a thematic exploration of race and identity in American culture and racist ideologies and oppression. Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**ENG 160 History of Game Design 3(3-0)**

Examines the development of modern tabletop and video games (e.g., *Catan*, *Dungeons & Dragons*, *Pokémon*, *Minecraft*) with a focus on design and cultural impact. Identical to HST 160. Credit may not be earned in more than one of these courses. This course may be offered in an online format. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

**ENG 175 The Nature of Language 3(3-0)**

Introduction to the study of language and social systems. Topics include linguistic structures, acquisition, varieties, and change. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**ENG 193 Writing Workshop 1(Spec)**

Individualized writing tutorial taken concurrently with ENG 103. Work may include grammar, mechanics, and spelling as well as finding, narrowing, and developing ideas for writing. With ENG 103, meets university requirements for Freshman Composition Competency; alternative to ENG 101 and ELI 198. CR/NC Only. Co-requisite: ENG 103.

**ENG 201 Intermediate Composition 3(3-0)**

An intensive writing course intended to prepare students for writing in their upper-level major courses and beyond. Must be taken before reaching 56 credits. Satisfies Intermediate Composition Competency. This course may be offered in an online format. Prerequisite: Grade of C or better in ENG 101, ENG 103/193, or ELI 198. Recommended: Students who feel they might need additional help with their writing should consider enrolling in ENG 299 at the same time.

**ENG 204 LGBTQ Identities 3(3-0)**

Explores the social and cultural contributions of LGBTQ individuals and communities as well as discrimination based on gender identity and sexuality. May be offered as Writing Intensive. Identical to WGS 204 and SOC 204. Credit may not be earned in more than one of these courses. Recommended: ENG 101. (University Program Group IV-A: Studies in Discrimination)

**ENG 211WI Introduction to English Education 3(3-0)**

Introduction to foundational concepts and current topics in the field of English education. Includes a clinical experience. Writing Intensive. Prerequisites: ENG 101, ENG 103, or ELI 198 with a grade of C or better.

**ENG 234WI Introduction to Literary Analysis 3(3-0)**

Introduction to analytical techniques for reading and writing about literary texts from a variety of genres and historical periods, including fiction, drama, and poetry. Writing Intensive. Recommended: ENG 101 or ENG 103/193 or ELI 198 with grade of C or better. (University Program Group I-B: The Arts)

**ENG 271 Modern Grammar 3(3-0)**

Descriptive analysis of English syntax (sentence structure), syntactic variation across dialects, and social norms influencing what constitutes "Standard English." This course may be offered in an online format. Prerequisite: ENG 101 or 103/193 or ELI 198 with a grade of C or better.

**ENG 274QR Odd Words and Word Odds 3(3-0)**

Applying fundamental concepts from statistics and probability to word games, text analysis, and more. Quantitative Reasoning.

**ENG 294WI Introduction to Creative Writing 3(3-0)**

The basic methods and techniques in creative writing, including, but not limited to, poetry and fiction. Writing Intensive. Recommended: ENG 101 or ENG 103/193 or ELI 198 with a grade of C or better.

**ENG 299 Writing Workshop II 1-6(Spec)**

Individualized writing workshop offering assistance in planning, drafting, and revising writing, grammar, and citations. May be repeated, one credit per semester. This course may be offered in an online format. CR/NC Only. Co-requisite: Enrollment in at least one other CMU course.

**ENG 300 Study Abroad: Special Studies in English Studies 3-6(3-0)**

Study abroad course in English Studies. Course may be repeated up to six hours when content does not duplicate previous topic. Prerequisites: ENG 201 with a grade of "C" or higher; permission of instructor. Recommended: ENG 234.

**ENG 301WI Nonfiction Writing 3(3-0)**

Development of nonfiction writing skills through individual projects in diverse genres. This course may be offered in an online format. Writing Intensive. Prerequisites: ENG 201 with a grade of "C" or better.

**ENG 303WI Technical Writing 3(3-0)**

Processes and strategies for writing technical correspondence, reports, proposals, and instructions; emphasizes ethics and usability. Writing Intensive. May be offered in an online format. Prerequisites: ENG 201 with a C or better; completion of 56 credits.

**ENG 311 Teaching Literature in Secondary Schools 3(3-0)**

Methods of teaching literature and reading in middle and high schools. Includes clinical experience. Prerequisites: ENG 201 with a C or better; ENG 211WI or 56 credit hours completed; ENG 234WI.

**ENG 315WI Teaching Writing in Elementary and Middle Schools 4(3-1)**

Introduction to theories and pedagogies on writing in elementary and middle schools. Pre-student teaching field experience. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisites: ENG 201 with a grade of C or better; Admission to Teacher Education.

**ENG 316 Teaching Writing and Grammar, Grades 3-6 3(3-1)**

Preparation for teaching writing and grammar in grades 3-6. Includes 20 student contact hours in local 3rd-6th grade classroom. May be offered in an online format. Prerequisites: ENG 201 with a grade of C or better, ENG 381, EDU 330.

**ENG 319 Teaching Composition in Secondary Schools 3(3-0)**

Methods of teaching writing in secondary English classrooms. Prerequisites: ENG 201, ENG 234WI, ENG 211WI, and 56 credit hours completed.

**ENG 323 Fantasy and Science Fiction 3(3-0)**

History, meaning, and influence of fantasy and science fiction. Emphasis on 19th-21st century literature and film. This course may be offered in an online format. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**ENG 324WI Popular Culture in America 3(3-0)**

Study of popular American art forms from their historical, sociocultural, critical, and/or theoretical contexts. Writing Intensive. This course may be offered in an online format. Prerequisite: ENG 201 with a grade of C or better.



**ENG 325 Stories, Spells, and Songs: Folklore and Folklife 3(3-0)**

Discussion and comparison of folktales, songs, superstitions, and customs preserved in both oral and literary traditions. Prerequisites: ENG 201 with a C or better.

**ENG 326 Never-Ending Stories: Adaptation across Media 3(3-0)**

*Examination of the techniques and technologies of story as it is shifted from one frame of reference (media, format, intended audience, culture, time) to another. This course may be offered in an online format. Recommended: ENG 201. (University Program Group I-B: The Arts)*

**ENG 327 Women Writers: Gender, Sexuality, and Literature 3(3-0)**

*Examination of women writers in a variety of historical and cultural traditions, approached through the lenses of feminist and queer theory. Identical to WGS 327. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. Prerequisite: ENG 201 with a grade of C or better. (University Program Group IV-A: Studies in Discrimination)*

**ENG 328 Native American Literature and Film 3(3-0)**

*A study of Native American literature and film within their cultural contexts. Prerequisites: ENG 201 with a grade of C or better. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**ENG 329 African American Literature 3(3-0)**

*Examines literary and cultural contributions of African Americans from colonial times to present through written and oral expression, e.g., poetry, fiction, drama, nonfiction, and music. Prerequisites: ENG 201 with a grade of C or better. (University Program Group IV-C: Studies in Racism and Cultural Diversity)*

**ENG 330 Gods, Monsters, and Immortality: Mythic Literature 3(3-0)**

*The origins and development of mythic patterns with major emphasis on the adaptation and interpretation of classical and Northern myths to literary usage. (University Program Group I-A: Human Events and Ideas)*

**ENG 333 Literatures of Non-Western Cultures 3-6(3-0)**

Introduction to literatures of non-Western cultures, such as African, Asian, Middle Eastern, Aboriginal, Caribbean, or Latin American. Repeatable up to 6 hours when content does not duplicate previous topics. Prerequisites: ENG 201 with a grade of C or better or ENG 234WI with a grade of C or better.

**ENG 334 Literary and Cultural Theory 3(3-0)**

Intensive survey of theories of literature, interpretation, and culture that have been of historical importance to literature and cultural studies. Prerequisites: ENG 201 with a grade of C or better; ENG 234. Recommended: at least three hours of literature courses at the 300-level or above.

**ENG 335 Topics in Ancient or Medieval Literature 3-6(3-0)**

Focused topics introducing key literary movements and historical contexts from antiquity to 1500. Prerequisite: ENG 234.

**ENG 336 Texts in Contexts: Reimagining Literary History 3-9(3-0)**

Pairs literary texts (before 1900) across historical contexts and uses digital archives and resources to contextualize these texts. Prerequisites: ENG 201, ENG 234WI.

**ENG 337 Literary Modes and Genres 3-6(3-0)**

Topics in literary analysis that focus on genre, media, and modalities, with comparative approaches to reading and writing among genres, authorship, adaptation, and audience interaction. Prerequisites: ENG 201, ENG 234WI.

**ENG 338 Literature as Inquiry 3-6(3-0)**

Use and exploration of literary and non-literary texts to investigate a complex idea or social phenomena (e.g., revolution, technology, migration/diaspora, utopia/dystopia, justice/criminality, madness, urban/rural experience). Prerequisites: ENG 201, ENG 234WI.

**ENG 349 Shakespeare 3(3-0)**

A study of selected sonnets and a variety of comedies, histories, and tragedies with consideration of their historical and cultural contexts. May be offered as Writing Intensive. Prerequisites: ENG 201 with a grade of C or better. Recommended: ENG 234.

**ENG 371 Teaching Grammar: K-6 3(3-0)**

Introduction to best practices for teaching K-6 students how to apply grammar concepts to their writing and other means of communication. This course may be offered in an online format. Prerequisites: ENG 201 with a grade of C or better; admission to Teacher Education. Recommended: ENG 175.

**ENG 372 Teaching Grammar in Secondary Schools 3(3-0)**

Methods of teaching grammar in middle and high schools, grades 5-12. Prerequisite: ENG 201 with a grade of C or better. Pre/co-requisites: ENG 211WI, ENG 175.

**ENG 375 Introduction to Linguistics 3(3-0)**

A survey of the field of linguistics, including discussion of sounds, word structure, sentence structure, meaning, acquisition, social use and historical change of language. Prerequisite: ENG 201 with a grade of C or better. Recommended: ENG 175.

**ENG 381WI Children's Literature 3(3-0)**

*Examination and analysis of contemporary prose and poetry suitable for children from literary, aesthetic, sociocultural and educational perspectives. Writing Intensive. (University Program Group I-A: Human Events and Ideas)*

**ENG 382 Racism and Diversity in Children's and Young Adult Literature 3(3-0)**

*Examination of racism, racial identity and diversity, historically and in the present, through a range of genres of American literature for children and young adults. Prerequisites: ENG 201 with a C or better; ENG 134 or 234 or 381. (University Program Group IV-C: Studies in Racism and Cultural Diversity)*

**ENG 391WI Creative Writing: Fiction 3(3-0)**

Discussion of craft of fiction and constructive evaluation of student fiction. Writing Intensive. Prerequisite: ENG 294 with a grade of B or better. Recommended: ENG 201 with a grade of C or better.

**ENG 392WI Creative Writing: Poetry 3(3-0)**

Discussion and critical evaluation of student poetry. Writing Intensive. Prerequisite: ENG 294 with a grade of B or better.

**ENG 395 Special Topics 1-6(Spec)**

Consideration of subjects not listed in the regular department offerings. May be repeated when content is not a duplication of a previous special topic offering. This course may be offered in an online format. Prerequisite: ENG 201 with a grade of C or better.

**ENG 397 Independent Study 1-9(Spec)**

Individualized study in an interest area related to English language, literature, writing, and/or pedagogy agreed upon by the student and supervising instructor. May be repeated when content does not duplicate a previous independent study. Prerequisites: ENG 201 with a grade of C or better; at least one other English course at the 200-level or higher; approval of the instructor and department chairperson required before registration.

**ENG 398 Internship 3(Spec)**

Experiential learning in a workplace that requires application of three or more skills in English: reading, writing, communicating orally, or editing. CR/NC Only. Prerequisites: Students must be enrolled in a major, minor, or certificate program in the Department of English Language & Literature; students must have completed at least 75 credits toward their degree, including ENG 101, ENG 201 and at least 12 credits of ENG courses at the 300-level or higher with a "C" or better.

**ENG 402WI Argumentation and Expository Writing 3(3-0)**

Study of and practice using modern theories and techniques of argumentation and persuasive writing in contemporary civic, disciplinary, and professional discourse, contexts, and media. May be offered in an online or hybrid format. Writing Intensive. Prerequisites: ENG 201 with a grade of C or better; senior standing. Recommended: ENG 301 or 303 or COM 352.

**ENG 403 Document Design 3(3-0)**

Theories and applications of information design and visual rhetoric for print and electronic documents. This course may be offered in an online format. Prerequisites: ENG 201 with a grade of C or better; 56 credit hours completed. Recommended: ENG 303WI with a grade of C or better.

**ENG 404 Technical Editing 3(3-0)**

Methods and technologies used in editing a wide range of technical documents; includes copyediting, proofreading, and comprehensive editing. This course may be offered in an online format. Recommended: ENG 271. Prerequisites: ENG 303WI with a C or better; 56 credit hours completed.

**ENG 435WI Senior Seminar: Advanced Literary Analysis 3(3-0)**

Intensive analysis of one or more complex literary texts, including an exploration of historical and critical contexts. Writing Intensive. Prerequisites: ENG 334, 21 hours of ENG courses, and senior standing.

**ENG 439 English Romantic Poetry and Prose 3(3-0)**

Emphasis on Blake, Wordsworth, Coleridge, Keats, Shelley, and Byron. Recommended: 6 hours of literature.

**ENG 441 Contemporary English Prose 3(3-0)**

Important novelists and dramatists in contemporary Britain. Prerequisites: Grade of "C" or better in ENG 101, ENG 103/193 or ELI 198; grade of "C" or better in ENG 201; ENG 134 or 234.

**ENG 442 The British Novel 3(3-0)**

The development of the British novel considered historically or thematically. Prerequisites: ENG 201 with a grade of C or better; ENG 134 or 234.

**ENG 444 In Her Own Words: Global Feminist Perspectives 3(3-0)**

Theories, methodologies, and applications of Global Feminisms to women-authored texts in an international context. May include a study abroad component. Prerequisite: ENG 201 with a grade of C or better; ENG 234 or WGS 296.

**ENG 454 Contemporary American Prose 3(3-0)**

Important novelists and dramatists in contemporary United States. Prerequisites: ENG 101 or 103/193 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; ENG 134 or 234.

**ENG 455 The American Novel 3(3-0)**

The development of the novel as seen in the works of representative authors. Prerequisites: ENG 201 with a grade of "C" or better; ENG 234.

**ENG 481 International Literature for Youth 3(3-0)**

Exploration of the literary and cultural heritage of countries other than the United States through a diverse selection of international texts for today's youth. Prerequisites: ENG 201 with a grade of C or better; ENG 234 or 381.

**ENG 482 Fantasy for Youth 3(3-0)**

Examination of modern fantasy for youth, its traditional and contemporary presentations of archetypes and motifs, and its value, purpose, and significance within literary traditions. Prerequisites: ENG 201 with a grade of C or better; ENG 234 or ENG 381.

**ENG 485 Poetry for Children and Young Adults 3(3-0)**

Study of the nature, purpose, and value of poetry for children and young adults; emphasis on interpretation and performance. Prerequisites: ENG 201 with a C or better; ENG 134 or 234 or 381.

**ENG 491WI Advanced Fiction Writing 3-6(3-0)**

Concentration upon individual projects in fiction. May be repeated up to 6 hours. Writing Intensive. Prerequisites: ENG 201 with a grade of C or better; ENG 391 with a grade of B or better.

**ENG 492 Advanced Poetry Writing 3-6(3-0)**

Concentration upon individual projects in poetry writing. May be repeated up to 6 hours. May be offered as Writing Intensive. Prerequisites: ENG 201 with a grade of C or better; ENG 234; 392.

**ENG 493WI Creative Nonfiction 3-6(3-0)**

Workshop in contemporary approaches to writing creative nonfiction. Course may be repeated up to six hours. May be offered in an online format. Writing Intensive. Prerequisites: ENG 201 with a grade of C or better; ENG 294 or 301.

**ENG 510WI Writing Center Practicum 1-3(Spec)**

Examines key issues in writing and teaching writing and provides a mediated, instructional experience for working one-on-one with writing. Writing Intensive. Prerequisites: Permission of Instructor.

**ENG 513 Special Topics 1-6(Spec)**

Subjects not part of regular department offerings. May not be a duplication of a previous section. This course may be offered in an online or hybrid format. Prerequisites: 86 credit hours completed; or graduate standing.

**ENG 514 Language and Media Discourse 3(3-0)**

Examination and application of rhetorical and discourse theory and techniques in media. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisites: Graduate standing or completion of 56 credit hours. Recommended: ENG 301.

**ENG 517 Reading and the English Classroom 3(3-0)**

The relationship of reading to the teaching of English through an introduction to the reading process, the needs of reluctant readers, and K-12 and ESL literacy issues.

**ENG 519 Teaching Composition 3(3-0)**

Research and methodology in the teaching of composition. This course may be offered in an online format. Prerequisites: Graduate standing or completion of 56 hours.

**ENG 520 Diachronic Linguistics and the History of English 3(3-0)**

Theory and methodologies of diachronic linguistics, with a focus on the development of the English language. Prerequisite: Graduate standing or ENG 375.

**ENG 535 Seminar in Literary and Cultural Theory 3(3-0)**

Seminar in literary and cultural theories of historical and contemporary importance to literature studies. Prerequisite: ENG 334 or graduate standing.

**ENG 539 Seminar in Major Nonfiction Writers 3-9(Spec)**

Creative and critical approaches to the study of representative works by selected major nonfiction writers. May be repeated to a maximum of nine hours. May be offered in a hybrid or online format. May be offered as Writing Intensive. Prerequisites: ENG 201 with a C or better; ENG 134 or 234; or graduate standing.

**ENG 545 Love, Plague, and Chivalry: Chaucer's Works and World 3(3-0)**

Study of the life, works, and world of Geoffrey Chaucer. Prerequisites: ENG 201; 234; or graduate standing. Recommended: ENG 334.

**ENG 547 Seminar in Major British Writers 3-9(3-0)**

A study of one or more British writers, selected by the instructor. May be repeated for a maximum of nine credit hours as long as the topic is different each time. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 134 or 234. Recommended: 6-9 credit hours of ENG courses at the 300- or 400-level.

**ENG 549 Advanced Shakespeare 3(3-0)**

Close study of a selection of Shakespearean texts. May be offered in an online or hybrid format. Prerequisites: Graduate standing or ENG 201 with a grade of C or better; ENG 234; ENG 349.

**ENG 559 Seminar in Major American Writers 3-9(3-0)**

A study of several American writers selected by the instructor. May be repeated for a maximum of nine credit hours as long as the topic is different each time. Prerequisites: ENG 201, 234; or graduate standing.

**ENG 560 Clinical Practice in English Education 4(Spec)**

Application of skills and knowledge for teaching English in secondary classrooms with diverse student populations. Includes pre-student teaching clinical experience. Prerequisite: ENG 311; Pre/Co-requisite: ENG 319; or graduate standing.

**ENG 561 European Romanticism 3(3-0)**

Comparative exploration of the Romantic movement in literature and philosophy with special attention to Germany and France. Prerequisites: ENG 234 and 6 hours of literature; or graduate standing.

**ENG 566 Human Rights in Literature, Art, and Film 3(3-0)**

Exploration of the history, development, and application of human rights as represented in literature, the arts, and film. Prerequisite: Admission to any of the English department's MA programs or ENG 201 with a grade of C or better; ENG 134 or 234.

**ENG 569 Seminar in Major World Writers 3-9(3-0)**

A study of one or more writers, selected by the instructor, from various regions of the world. May be repeated for a maximum of nine credit hours. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 134 or 234. Recommended: 6-9 credit hours of ENG courses at 300- or ENG 400-level.

**ENG 570 Old English 3(3-0)**

Study of the grammar and pronunciation of Old English and analysis of Old English literary texts. Prerequisites: Graduate Status or ENG 201 with a grade of C or better; ENG 134 or 234.

**ENG 571 Methods in Teaching of English to Speakers of Other Languages 3(3-0)**

Principles and techniques for teaching English to students whose first language is not English. This course may be offered in an online format. Pre/Co-requisite: ENG 375, or admission into graduate program.

**ENG 574 TESOL Materials, Assessment, Curriculum 3(3-0)**

Techniques for designing curricula, teaching materials, and tests and other assessment tools for K-12 and adult ESL/EFL or bilingual/bicultural classrooms. This course may be offered in an online format. Pre/Corequisite: ENG 571.

**ENG 575 English Learner Standards and Assessments: K-12 3(3-0)**

State and English language proficiency (ELP) standards and assessments, including administration, data analysis, and related instructional practices. ELP assessment certification: WIDA K-12. This course may be offered in an online format. Prerequisites: ENG 201 with a grade of C or better; Admission to Teacher Education or graduate status.

**ENG 577 Introduction to Second Language Acquisition 3(3-0)**

An introduction to the principles and theories of second language acquisition and their implications for language teaching. This course may be offered in an online format. Pre/Co-requisite: ENG 375 or graduate status.

**ENG 578 Applied Sociolinguistics 3(3-0)**

Topics include language variation and identity, bilingualism/multilingualism in both social and institutional structures, language contact, and language standardization, discrimination, and policy. This course may be offered in an online format. Pre/Co-requisite: ENG 375 or graduate standing.

**ENG 580 Young Adult Literature 3(3-0)**

Examination of literary texts designed for and about adolescents and adolescence. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 234 or ENG 381.

**ENG 581 The History of Children's Literature in English 3(3-0)**

Study of the historical development of British and American Children's Literature (including colonial, multicultural, and European Fairy Tale traditions) with attention to socio-cultural influences. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 234 or 381.

**ENG 582 Seminar in Diversity in Children's and Young Adult Literature 3-9(3-0)**

Rotating topics course exploring diversity in children's and young adult literature; a focus may include race/ethnicity, disability, gender/orientation, nationality, and/or intersectionalities. May be repeated up to 9 hours when content does not duplicate previous topics. Prerequisite: Graduate status or the following: ENG 201 with a grade of C or better; ENG 134 or 234 or 381.

**ENG 583 Texts for the Middle Grades 3(3-0)**

Study of genres, formats, and media appropriate for grades 5-9. Emphasizing print, film, and digital texts that reflect diverse cultures, traditions, and perspectives. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 234WI or ENG 381WI.

**ENG 591 Seminar: Writing Fiction 3-6(3-0)**

Undergraduate/Graduate workshop in fiction writing. May be repeated up to 6 hours. Prerequisite: ENG 391; or admission to MA in English Language & Literature, Creative Writing Concentration. Recommended: Permission of instructor based on portfolio of student's fiction.

**ENG 592 Seminar: Writing Poetry 3-6(3-0)**

Undergraduate/Graduate workshop in poetry writing. May be repeated up to 6 hours. Prerequisite: ENG 392; or admission to MA in English Language & Literature, Creative Writing Concentration. Recommended: Permission of instructor based on portfolio of student's poetry.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**ENG 602 Introduction to Graduate English Studies 3(3-0)****ENG 616 The Teaching of Creative Writing 3(3-0)****ENG 619 Continuing Registration for Final Research Project 1(1-0)****ENG 621 Seminar in Contemporary Poetry 3-6(3-0)****ENG 622 Seminar in Contemporary Fiction 3(3-0)****ENG 635 Seminar in English Literature 3-9(3-0)****ENG 636 Seminar in Critical Problems 3(3-0)****ENG 656 Seminar in American Literature 3-9(Spec)****ENG 665 Seminar in Comparative World Literatures 3-9(3-0)****ENG 672 Applied Linguistics for Written Communication 3(3-0)****ENG 673 English Phonology for Language Teachers 3(3-0)****ENG 674 English Grammar for Language Teachers 3(3-0)****ENG 675 Seminar in English Linguistics 3-9(3-0)****ENG 680 Chippewa River Writing Project Institute 3(3-0)****ENG 681 Seminar in Children's and Young Adult Literature 3-9(3-0)****ENG 690 Practicum in TESOL 1-3(Spec)****ENG 691 Seminar: Writing Fiction 3-6(3-0)****ENG 692 Seminar in Writing Poetry 3-6(3-0)****ENG 693 Seminar: Writing Creative Nonfiction 3-6(3-0)**

**ENG 694 The Craft of Fiction 3(3-0)**

**ENG 695 The Craft of Poetry 3(3-0)**

**ENG 696 The Craft of Creative Nonfiction 3(3-0)**

**ENG 697 Independent Study 3-6(Spec)**

## ENS - Environmental Science

*See the Department of Earth and Atmospheric Sciences for more information.*

**ENS 101QR Of Earth and Us: Introduction to Environmental Science 3(2-2)**

Explore environmental systems through examination of major issues facing humanity today. Topics include water availability and quality, climate change, sustainable resource management, pollution, and biodiversity. Satisfies University Program Group II Laboratory requirement. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Sciences)

**ENS 211 Introduction to Professional Development in Environmental Science 1(1-0)**

Introduction to the requirements and opportunities of an Environmental Science career and preparation for success in CMU's program. Prerequisites: MTH 130 or placement. Pre/Co-requisite: ENS 101QR.

**ENS 307 Environmental Field Sampling and Laboratory Analytics 4(2-4)**

Covers methods used for sample collection and preservation (including water, sediment, and soils) and explores the analytical techniques used to characterize these environmental samples. Prerequisites: ENS 323 with a C- or better; GEL 308 or EGR 408; PHY 145QR.

**ENS 313 Special Topics in Environmental Science 1-6(Spec)**

Various special topics in environmental science. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisite: See course search and registration.

**ENS 323 Biogeochemical Cycling in the Environment 3(2-3)**

Earth systems approach to studying biogeochemical cycles from molecular to global scales. Topics include: climate, energy, water cycling, ecology, biosphere, carbon and nutrient cycles. Prerequisites: ENS 101QR and CHM 131 or EGR 203 and GEL 130QR; one of MTH 130 or MTH 132 or MTH 133.

**ENS 349 Phase I Environmental Site Assessment 1(1-0)**

Protocols for conducting a Phase I Environmental Site Assessment including site characterization and history and identification of Recognized Environmental Conditions. Prerequisite: GEL 380WI.

**ENS 353 Phase II Environmental Site Assessment 1(1-0)**

Protocols for conducting a Phase II Environmental Site Assessment including confirming and quantifying the presence of hazardous substances and/or petroleum products and risk-based corrective action. Prerequisite: ENS 349.

**ENS 389 Well Construction and Design 1(1-0)**

Protocols for design and construction of groundwater monitoring and production wells in accordance with ASTM standards and national guidelines. Identical to GEL 389. Credit may not be earned in more than one of these courses. Prerequisite: GEL 380WI.

**ENS 401WI Quantitative Environmental Data Analysis 3(2-2)**

In-depth application of quantitative, statistical, and computational methods used in visualization and interpretation of environmental datasets. Emphasis on field and laboratory data analysis. Writing Intensive. Prerequisites: ENS 307 or EGR 306 or MET 312, all with a C- or better; MTH 133; STA 382QR or STA 392. For students in the Environmental Analytics minor, MET 301, GEL 308 and DAS 252 with a C- or better; MTH 133; STA 382QR or STA 392.

**ENS 409 Professional Development in the Fields of Environmental Science and Geoscience 1(0-2)**

Preparation for entry into the fields of Environmental Science and Geoscience. Identical to GEL 409. Credit may not be earned in more than one of these courses. Pre/Co-requisite: ENS 401 or GEL 340.

**ENS 491 Internship in Environmental Science 1-3(Spec)**

Internship in the field of environmental science. Prerequisites: Three or more courses in ENS program (2 of which must be 300 level or higher), permission of instructor.

**ENS 503 Environmental Modeling 3(2-3)**

Environmental models used to understand behaviors and interactions in complex systems. Includes design and building of environmental models, calibration, verification, and validation. Prerequisites: ENS 401 with a C- or better; or graduate standing in a CSE program; or STA 392 and Pre/Co-requisite EGR 306.

**ENS 597 Independent Study in Environmental Science 1-3(Spec)**

Research in environmental science with topics agreed upon by student and instructor. May be taken only by arrangement prior to registration. Prerequisites: Three or more courses in ENS program (2 of which must be 300 level or higher) or graduate status in a CST program; permission of instructor.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**ENS 750 Scientific Communication 1-4(Spec)**

## ENT - Entrepreneurship

*See the Department of Entrepreneurship for more information.*

**ENT 200 Introduction to Entrepreneurship 3(3-0)**

Covers key entrepreneurship terms, concepts and resources. Students learn about the traits and importance of entrepreneurs, challenges entrepreneurs commonly face, and different entrepreneurial pathways. This course may be offered in an online format. Prerequisite: BUS 100 with a C or better or 26 semester hours completed.

**ENT 210 Accounting Concepts for Entrepreneurs 3(3-0)**

Introduction to principles of financial and managerial accounting with practical application to the growth and management of an entrepreneurial venture. This course may be offered in an online format.

**ENT 213 Economics for Entrepreneurs 3(3-0)**

Introduction to the economic way of thinking and its applications to decision making in the business world. Emphasis on understanding and applying economic concepts. Does not count as credit for the Economics major or minor. This course may be offered in an online format.

**ENT 221 Marketing Strategies for Entrepreneurs 3(3-0)**

General marketing principles applied to the entrepreneurial venture including daily activities, long-term branding/position strategy, inexpensive ways to conduct research, and utilizing networks to identify/reach customers. This course may be offered in an online format. Recommended: BUS 100, ENT 200.

**ENT 300 Digital Entrepreneurship 3(3-0)**

The use and management of information systems (IS) by entrepreneurs around the world, creating value from information systems and exploring digital entrepreneurship. This course may be offered in an online format. Prerequisite: 56 semester hours completed.

**ENT 301 Innovation & Entrepreneurship 3(3-0)**

Explores the relationship between innovation, entrepreneurship and creativity. Students recognize, develop, and act on their potential for innovation. They generate, evaluate, and present entrepreneurial ideas. This course may be offered in an online format. Prerequisites: ENT 200 with a C or better; 56 semester hours completed.

**ENT 320 Financial Concepts and Entrepreneurial Ventures 3(3-0)**

Practical application of financial principles to the creation, growth, and management of an entrepreneurial venture. This course may be offered in an online format. Prerequisites: 56 semester hours completed; ENT 210 or ACC 201 or ACC 250. Recommended: STA 282.

**ENT 416 Entrepreneurship in the Global Economy 3(3-0)**

Primary focus is on how individuals and small companies recognize and seek out business opportunities in a global economy leveraging the power of technology; hands-on assignment-based course with a major global team project component. Does not count on the Department of Management majors or minors. This course may be offered in an online format. Prerequisites: ENT 213, 221; 56 semester hours completed; signed major in Entrepreneurship.

**ENT 419 Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)**

This course emphasizes the acquisition of skills and knowledge necessary to successfully maintain and grow an established entrepreneurial venture within a global business environment. This course may be offered in an online format. Prerequisites: 56 semester hours completed; signed major or minor in Entrepreneurship.

**ENT 420 Legal Aspects of New Ventures 3(3-0)**

Introduces entrepreneurs to legal requirements for forming a business. This course may be offered in an online format. Prerequisites: 86 semester hours completed; signed major or minor in Entrepreneurship.

**ENT 444 Internship in Entrepreneurship 3-6(Spec)**

Student works full or part time in a business situation for educational experience. Must be arranged through Entrepreneurship Internship Supervisor. This course may be offered in an online format. Prerequisites: ENT/ACC 210, ENT/ECO 213, and ENT/MKT 221; 56 semester hours completed; signed major or minor in Entrepreneurship; approval of Entrepreneurship Internship Supervisor. Recommended: ENT/FIN 320 and ENT/MGT 419.

**ENT 492 Emerging Venture Consulting 3(3-0)**

Work with local small business clients and entrepreneurs to conduct analysis and provide deliverables that enable the business to operate more effectively and to grow. This course may be offered in an online format. Prerequisites: 86 semester hours completed; signed major or minor in Entrepreneurship; ENT/MKT 221; ENT/BIS 300; ENT/FIN 320. Recommended: ENT/MGT 419.

**ENT 495 Venture Development 3(3-0)**

Analyzing opportunities, writing business summaries, preparing financial projections, pitching opportunities, marshalling resources and other advanced entrepreneurship topics. This course may be offered in an online format. Prerequisites: ENT 301; 86 semester hours completed.

**ENT 497 Special Topics in Entrepreneurship 1-12(Spec)**

Selected topics not covered in existing courses with current topic listed in Course Search and Registration. Specific topics will be listed on the student's transcript. Repeatable up to 12 credits with different topics. Only 3 credits will count toward entrepreneurship major or minor. This course may be offered in an online format. Prerequisite: See Course Search and Registration.

*For graduate level course descriptions above 600, consult the current Graduate*



*Studies Bulletin.*

- ENT 600 Business Foundations for Entrepreneurs 3(3-0)**
- ENT 605 Foundations of Entrepreneurship 3(3-0)**
- ENT 620 New Venture Formation and Governance 3(3-0)**
- ENT 625 New Venture Hires, Filings and Reports 3(3-0)**
- ENT 630 Seed Financings and Securities Regulation 3(3-0)**
- ENT 640 Intellectual Property for Entrepreneurs 3(3-0)**
- ENT 650 Crowdfunding 3(3-0)**
- ENT 660 Technology for Entrepreneurs 3(3-0)**
- ENT 670 Venture Capital 3(3-0)**
- ENT 680 Growth and Risks at Emerging Ventures 3(3-0)**
- ENT 690 Entrepreneurial Acquisitions and Exits 3(3-0)**
- ENT 695 Entrepreneurial Transactions Capstone 3(3-0)**

## ENV - Environmental Studies

*See the Environmental Studies Major in the Index for more information.*

- ENV 101 Introduction to Environmental Studies 3(3-0)**  
An overview of society and the environment. Topics include human population and resources, markets and commodities, institutions, ethics, risks and hazards, political economy, and constructions of nature. This course may be offered as Writing Intensive. Recommended: ENG 101. (University Program Group III-B: Social Structures)
- ENV 197 Special Topics 1-6(Spec)**  
Qualified students may explore environmental topics of special interest with faculty guidance.
- ENV 300 Environmental Justice: Race, Gender, Poverty 3(3-0)**  
An examination of how environmental issues interact with inequalities in society including race, gender, and poverty within the United States and internationally. Prerequisites: Sophomore standing. Recommended: One of: ENS 101QR, ENV 101, GEO 120QR, SEP 300. (University Program Group IV-A: Studies in Discrimination)
- ENV 310 Environmental Issues Management 3(3-0)**  
Review of regulatory requirements and application of scientific studies to managing environmental risk. Case studies of risk management by the targeted community and regulatory agencies. Prerequisite: One of: ENV 101, GEO 120QR, ENS 101QR.
- ENV 312 Adapting to Our Changing Climate 3(3-0)**  
Our climate is changing! Learn how climate change will affect the environment and our society and how we can effectively adapt to climate change. Prerequisites: ENV 101 or ENV 300; one of: ENS 101QR, GEO 105, GEO 201, MET 101; one of: SOC 200, STA 282QR, STA 382QR, BIO 500.
- ENV 320 Environmental Assessment and Practice 3(3-0)**  
This course introduces the purpose and methodology of environmental impact assessment as a tool for environmental management and decision-making. Emphasis on National Environmental Policy Act. Prerequisite: ENV 310.
- ENV 350 Foundations of Environmental Thought 3(3-0)**  
Key perceptions, values, and theories that provide blueprints for how we as humans use, abuse, and conserve our environment. Prerequisite: ENS 101QR or ENV 101 or GEO 120QR.
- ENV 360 Water Resources Management 3(3-0)**  
This course integrates social and natural science frameworks to examine water resource governance, allocation, and demand. Prerequisite: ENS 101QR or ENV 101 or GEO 120QR.
- ENV 365 Energy and the Environment 3(3-0)**  
Broad understanding of current energy system and its challenges, its interaction with the environment, and paths towards sustainable energy. Basic tools for energy-related policy questions. Prerequisite: One of the following: ECO 301, ENV 310, GEO 330, GEO 317, GEL 385.
- ENV 397 Special Topics 1-6(Spec)**  
Qualified students may explore environmental topics of special interest with faculty guidance. Prerequisite: ENV 101.
- ENV 400WI Environmental Studies Capstone 3(3-0)**  
Seminar format; discussion, analysis and written/oral presentation of research relevant to contemporary environmental issues. Writing Intensive. Prerequisites: GEO 300; signed Environmental Studies major; senior standing. Pre/Co-requisites: ENV 310, 350.
- ENV 597 Special Topics 1-6(Spec)**  
Qualified students may explore environmental topics of special interest with faculty guidance. Prerequisite: At least 9 hours of ENV credits or graduate standing.

## ESC - Earth Science

*See the Interdisciplinary Earth Science program for more information.*

- ESC 340 Micrometeorology 3(3-0)**  
Radiation balance, heat and moisture exchange, and wind structure near the ground; influences of topography, soil type, cultivation techniques, and vegetation. Applications of agriculture, forestry, cities, and air pollution. Prerequisites: GEO 105, MET 201 or MET 240. Co-requisite: ESC 341.

### ESC 341 Micrometeorology Laboratory 1(0-2)

Field measurements of micrometeorological variables; examination of the impact of variations in the environment on the local climate. Co-requisite: ESC 340.

### ESC 400 Earth Science Education 3(2-2)

Study of earth science in the K-12 science curriculum, including relevant teaching methods and preparation of lesson plans in accordance with the State Science Content Standards. Prerequisites: Junior standing as a declared major or minor in Integrated Science or Earth Science Education; GEL 100 or 130; 9 additional hours distributed among major requirements for Integrated Science or Earth Science; Admission to Teacher Education.

### ESC 575 Special Studies in Earth Science 1-6(Spec)

Various special topics offered at an advanced undergraduate and graduate level. Topics announced in Course Search and Registration. Prerequisites: permission of instructor.

## FIN - Finance

*See the Department of Finance and Law for more information.*

### FIN 201QR Personal Finance 3(3-0)

A survival course designed to help students cope with financial aspects of life such as taxes, budgeting, inflation, various types of insurance, savings, and investing. Quantitative Reasoning.

### FIN 297 Special Topics 1-3(Spec)

Special topics on finance. Prerequisites: Vary with instructor.

### FIN 302 Integrated Financial Analysis 3(3-0)

Applied methods, with relevant theories, for a corporation to make decisions on investments, financing, and to evaluate performance in an integrative framework. Credit may not be earned in both FIN 302 and FIN 332. Prerequisites: Tier 2 Admission to Professional Business Studies; ACC 255, BIS 255, MGT 258. Co-requisites: MGT/MKT 303, MKT 304.

### FIN 303 Financial Administration 3(3-0)

Financial administration of both profit and not-for-profit organizations including methods of asset procurement and raising capital. Credit can only be earned in FIN 302, FIN 303, or FIN 332. Prerequisite: ACC 203.

### FIN 307 Fundamentals of Personal Financial Planning 3(3-0)

A professional course with emphasis on the personal financial planning process and the roles of health, property and liability insurance in financial planning. Prerequisites: ACC 201 or ACC 250.

### FIN 310 Investment Strategies for Personal Financial Planners 3(3-0)

Investment strategies utilizing the Certified Financial Planner® learning objectives. Credit can be earned in only FIN 310 or FIN 315 but not both for the Personal Financial Planning major. May not be applied to Finance major. Prerequisites: 56 hours completed; FIN 302 or FIN 332.

### FIN 315 Principles of Investments 3(3-0)

Provides students with basic knowledge about different investments and sources of information to enable them to make wiser investments and prepare to build portfolios. May be offered in online format. Prerequisites: ACC 250, 255; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

### FIN 317 Insurance Planning 3(3-0)

This course introduces students to risk management and insurance decisions in personal financial planning, including health, disability, property, liability, and long-term care risks and insurance. Prerequisite: ACC 201 or ACC 250.

### FIN 323QR Intermediate Personal Finance 3(3-0)

Quantitative reasoning and analysis of the business, legal, and practical issues relating to the personal, financial, and estate planning process. May not be applied to the Finance major or Personal Financial Planning major. Successful completion of this course satisfies the University Quantitative Reasoning Competency requirement. Prerequisite: 56 semester hours.

### FIN 325 Risk Management 3(3-0)

Identifying, analyzing, controlling, financing, and administering operational risks such as catastrophic loss exposures, third-party exposures, fiduciary exposures, employee injury exposures, juridical risks, and legal risks. Prerequisites: 56 credit hours completed.

### FIN 332 Managerial Finance 3(3-0)

Principles and techniques of the acquisition, management, and distribution of financial resources. Credit may not be earned in both FIN 302 and FIN 332. Prerequisites: ACC 201 or ACC 250; 42 semester hours completed. Recommended: ACC 202 or ACC 255.

### FIN 335 Real Estate Principles 3(3-0)

An introduction to real estate practice, institutions and participants with a focus on investment decision making, valuation, and debt financing. Prerequisite: ECO 202 or ECO 203 or ECO 211 or ECO 213 or ENT 213.

### FIN 336 Real Estate Finance and Investments 3(3-0)

Survey of the institutional landscape of real estate finance, including debt and equity, public securities and private financing modes. Prerequisites: FIN 302 or FIN 320 or FIN 332; AND FIN 335.

### FIN 337 Real Estate Valuation/Appraisal 3(3-0)

The application of valuation techniques to the appraisal of properties purchased by investors for their income potential. Prerequisites: FIN 302 or FIN 320 or FIN 332, AND FIN 335.



**FIN 347 Retirement Planning 3(3-0)**

This course covers issues that individuals face in retirement (money needs, life-styles, medical) and develops an understanding of both public and private retirement plans. Prerequisites: FIN 307; FIN 310 or FIN 315; 56 hours completed. Pre/Co-requisite: ACC 311.

**FIN 397 Special Topics 3-6(Spec)**

Special topics on finance. Prerequisite: 56 credit hours completed.

**FIN 416 Institutional Operations 3(3-0)**

Study of the management policies and procedures for profitable operation of institutions such as commercial banks, thrift institutions insurance companies, finance companies and pension funds. Prerequisites: FIN 302 or FIN 332; FIN 472; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**FIN 425 Options and Futures 3(3-0)**

Survey of markets for futures and options on financial securities and commodities. Valuation of futures/options and application for hedging risk. Prerequisites: FIN 302 or FIN 332; FIN 315; 56 semester hours; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**FIN 438 Real Estate Development 3(3-0)**

A case-studies and applied-learning approach to real estate development integrating urban dynamics, architecture, construction, law, public approvals, finance, marketing and management. Prerequisites: FIN 335, FIN 336; admission to Professional Business Studies or a declared Real Estate Development and Finance minor.

**FIN 442 Intermediate Financial Management 3(3-0)**

In-depth examination of financial management building on introductory level course. Application of current theory and practices are discussed including simulation, comprehensive cases, and term project. Prerequisites: FIN 302 or FIN 332; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**FIN 445 Personal Estate Planning 3(3-0)**

Fundamentals of estate planning for personal use and professional training. Professional topics target applications in trust administration, accounting, and personal financial planning. Identical to BLR 445. Credit may not be earned in more than one of these courses. Prerequisite: 56 semester hours completed. Recommended: BLR 202 or BLR 235 or ACC 311 or FIN 307.

**FIN 447 Cases in Personal Financial Planning 3(3-0)**

Capstone personal financial planning course in client-centered personal financial planning. This course applies principles of personal financial planning in case studies. Prerequisites: FIN 317, FIN 347; 56 semester hours; Admission to the BSBA degree; Pre/co-requisite: FIN 445.

**FIN 448 Fundamental Financial Analysis 3(3-0)**

Methods of fundamental financial analysis necessary for evaluating and forecasting firm financial and operating performance. Prerequisites: FIN 302 or FIN 332; ACC 301; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**FIN 455 Portfolio Management 3(3-0)**

Learn advanced methods of analyzing and valuing both debt and equity securities, as well as theories and techniques for combining assets into efficient portfolios. Prerequisites: FIN 302 or FIN 332; FIN 315; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

**FIN 472 Money and Capital Markets 3(3-0)**

Survey of money and capital markets, strategies for growth, and timing of financial policy. Prerequisites: FIN 302 or FIN 332; ECO 201 or ECO 204, ECO 202 or ECO 203; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**FIN 490 Internship in Finance 1-3(Spec)**

Enrollment confined to a limited number of students working in business situations for educational experience. Prerequisites: permission of the department chairperson; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**FIN 491 Independent Studies 1-6(Spec)**

Research and writing on a topic selected in consultation with an instructor. Prerequisites: FIN 302 or FIN 332; 86 semester hours.

**FIN 497 Special Topics 1-6(Spec)**

This course covers material of special interest to undergraduates not covered in the regular curriculum. Prerequisites: 56 semester hours completed; FIN 302 or FIN 332; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**FIN 498 Seminar in Financial Theory 3(3-0)**

Financial theories, such as utility and arbitrage pricing will be studied. The efficacy of the theory to the application of finance in the world will be discussed. Prerequisites: FIN 442; permission of instructor; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**FIN 499 Advanced Financial Management 3(3-0)**

The capstone course in finance. Broad integrative topics within financial management are examined through cases, exams, and a written project. Required of finance majors. Prerequisites: FIN 302 or FIN 332, FIN 442, FIN 448; 86 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor. Recommended: FIN 472.

**FIN 573 International Finance 3(3-0)**

Role of financial manager in international corporations. Environmental problems of foreign exchange. Techniques for investment decisions, financing marketing operations, long-term capital structure and fund flow. Prerequisites: FIN 302 or FIN 332; FIN 425; FIN 448; admission to Professional Business Studies; or admission to the MBA Program.

**FIN 597 Special Topics 1-3(Spec)**

Selected topics of interest to students which are not formally included in existing courses. Specific topic will be listed on student's transcript. Prerequisites: 56 semester hours completed and Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor; or permission of MBA director.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**FIN 648 Advanced Financial Statement Analysis 3(3-0)****FIN 671 Financial Derivatives 3(3-0)****FIN 673 Advanced International Financial Management 3(3-0)****FIN 676 Investment Strategy 3(3-0)****FIN 680 Financial Modeling 3(3-0)****FIN 791 Independent Studies 1-6(Spec)****FIN 797 Special Topics 3-6(Spec)****FIN 798 Thesis 1-6(Spec)****FLN - Foreign Language**

*See the Department of History, World Languages, and Cultures for more information.*

**FLN 197 Special Topics 1-8(Spec)**

For students beginning the study of a language or topic not offered in the regular program of this department.

**FLN 297 Special Topics 1-8(Spec)**

For students continuing the study of a language or topic not offered in the regular program of this department.

**FLN 397 Special Topics 1-12(Spec)**

For students continuing at the 300 level the study of a language or topic not offered in the regular program of this department. Prerequisites: permission of instructor and department chairperson.

**FLN 597 Special Topics 1-8(Spec)**

The in-depth study of a topic within the language under the direction of a faculty member. Prerequisites: Permission of instructor.

**FMD - Fashion Merchandising and Design**

*See the Department of Fashion, Interior Design, and Merchandising for more information.*

**FMD 140 Introduction to Clothing Construction and Design 3(0-6)**

Fundamental construction techniques as a foundational basis for apparel design students.

**FMD 141 Fashion Fundamentals 3(2-2)**

Introductory design process, thinking and visual literacy for application to fashion. Emphasis on elements and principles of design, garment silhouettes, and basic Adobe Illustrator functions.

**FMD 155 Introduction to Textiles 3(2-2)**

Introductory course in textiles. Study of fiber, yarn, and fabric properties. Credit may not be earned in both FMD 155 and IND 155.

**FMD 200 Apparel Prototype and Quality Analysis 3(3-0)**

Comprehensive approach to assessing apparel quality including evaluate prototypes and methods to integrate quality into the design and development stages of sewn products. This course may be offered in an online format. Prerequisites: FMD 141, 155.

**FMD 225 Fashion in Paris 3(Spec)**

*Faculty-led study abroad program to Paris, France. Immersion in French fashion, language, cuisine, culture, and history. Extensive visits to cultural and historical sites. Prerequisites: 24 completed credits, minimum GPA of 2.5, and permission of instructor. (University Program Subgroup IV-B: Studies in Cultures Outside of the Anglo-American Tradition, Option 2)*

**FMD 241 Digital Fashion Illustration 3(1-3)**

Introduction to digital fashion illustration for fashion design. Critique/analysis of visual communication of fashion design and emphasis on digital portfolio development. This course may be offered in an online format. Prerequisite: FMD 141.

**FMD 245 Fashion Design Methods 3(0-6)**

Introduction to flat pattern as a method of fashion design. Effects of design method, fabric, construction and creativity on design products. Prerequisite: FMD 140.

**FMD 246 CAD for Fashion Design and Merchandising 3(0-4)**

Use of the computer as a design and merchandising communication tool. Development of apparel designs and fashion-related content via Adobe Illustrator and Photoshop. Prerequisite: FMD 141; Pre /Co-requisite: FMD 155.

**FMD 250 History of Western Dress 3(3-0)**

*History of Western dress from ancient times to the 21st century. May be offered as Writing Intensive. (University Program Group I-B: The Arts)*

**FMD 252 Dress and Culture 3(3-0)**

*Appearance and dress, as a reflection of social, psychological and cultural environments of humans; examination of dress as an aspect of culture and individual expression. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)*

**FMD 256 Introduction to Fashion Industry 3(3-0)**

Introduction to the fashion industry - the complex of enterprises concerned with the design, production, and distribution of men's, women's and children's apparel and accessories. Prerequisites: FMD 141.

**FMD 258 Fashion Retail Management 3(3-0)**

A comprehensive study of fashion retail management in a global environment. Topics include retailing strategy, merchandise management, store management, distribution channel, and supply chain logistics. Prerequisite: FMD 256.

**FMD 280 Queer Fashion 3(3-0)**

*Examination of LGBTQ+ experiences via historical fashion analysis. Emphasis on LGBTQ+ identity fashioned through sartorial choice. Gay aesthetic, camp culture, and LGBTQ+ designer contributions. Identical to WGS 280. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)*

**FMD 325QR Merchandising Mathematics & Spreadsheet Applications 3(3-0)**

Provides fundamentals of fashion buying and merchandising concepts and calculations. Students will also be introduced to spreadsheet concepts for quantitative merchandising analyses. This course may be offered in an online format. Quantitative Reasoning. Prerequisites: FMD 256, successful completion of math competency.

**FMD 326 Fashion Styling & Digital Communication 3(1-3)**

Introduction to fashion styling fundamentals, techniques, and applications to digital environments. Understanding professional roles of fashion stylists. This course may be offered in an online format. Prerequisites: FMD 246, FMD 256.

**FMD 330 Preprofessional Seminar in Fashion Merchandising and Design 2(2-0)**

Seminar prior to a supervised internship in a fashion merchandising/design firm or related business. Prerequisites: 56 credit hours completed; FMD 246; 18 credits of FMD coursework completed.

**FMD 345 Draping Fundamentals 3(0-6)**

Interpretation of fashion designs developed through draping on dress forms. Prerequisites: FMD 140, FMD 241, FMD 245.

**FMD 346 Advanced CAD for Apparel 3(0-4)**

Fashion product and textile line development for specified markets utilizing Lectra software. Electronic portfolio development. Prerequisites: FMD 246.

**FMD 347 Digital Pattern Development and Virtual Fit 3(1-3)**

Integrated design studio focused on complex design process through digital pattern development and 3D fit visualization. Continued focus on intensive design critiques and aesthetic development. Prerequisite: FMD 246; For Fashion Design Concentration: FMD 245; For Product Development Concentration: FMD 200.

**FMD 350 Professional Study Tour 1-3(Spec)**

Faculty led experiential learning experience to sites relevant to the fashion merchandising and design industry such as manufacturers, design houses, retailers and trade shows. Prerequisite: FMD 140 or FMD 256.

**FMD 355QR Textile Analysis 3(2-2)**

Relevance of standardized testing in quality control of textiles for end-use and serviceability. Quantitative Reasoning. Prerequisite: FMD 155.

**FMD 356 Visual Merchandising 3(1-3)**

Visual Merchandising for fashion product promotion and branding. Techniques of styling and window display. Creation of merchandising directives. Professional practice via team-based project completion. Prerequisites: FMD 246.

**FMD 357 Fashion Show Production and Promotion 3(Spec)**

Experiential course involving aspects of fashion show production. Event design, planning, staging, and promotion. This course may be offered in an online format. Prerequisites: A minimum of 24 completed credits.

**FMD 395 Business Intelligence for Fashion Buying and Operation 3(3-0)**

Introduces business intelligence tools and techniques for data-driven decision-making. Provides knowledge of fashion business planning, sourcing, supply chain operations, and stock management. This course may be offered in an online format. Prerequisite: FMD 325.

**FMD 397 Special Topics in Fashion Merchandising and Design 1-6(Spec)**

Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.

**FMD 401 Internship in Fashion Merchandising and Design 3(Spec)**

A structured internship experience that fosters transfer of knowledge and skill into competencies required for successful performance in a fashion merchandising or design career. Prerequisites: FMD 330.

**FMD 410 Fashion Advertising and Promotion 3(3-0)**

A study of key fashion media, cutting edge strategies, techniques for branding and advertising, and promoting fashion products. Prerequisites: FMD 246; 18 credits of FMD coursework completed.

**FMD 437 Digital Technologies and Craftsmanship for Apparel Design 3(0-6)**

Exploration of the creative design process via digital technologies and craftsmanship. Analysis of design strategies for solving aesthetic, functional, and technologically-related design problems. Prerequisites: FMD 245, 246.

**FMD 447 Collection Development 3(0-6)**

Studio focused on fashion collection development; creation of an apparel line from concept through production. Prerequisite: FMD 347.

**FMD 456 CAD for Visual Merchandising and Presentation 3(0-4)**

Software applications specific to visual merchandising in retail and virtual environments. Emphasis on creation of merchandising directives for product display. Prerequisites: FMD 246, FMD 356.

**FMD 490 Independent Study in Fashion Merchandising and Design 1-6(Spec)**

A student-initiated learning activity focusing on a faculty approved topic in Fashion Merchandising and Design. Prerequisite: Permission of instructor.

**FMD 497 Special Topics in Fashion Merchandising and Design 1-15(Spec)**

Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.

**FMD 510 Luxury Fashion Brand Management 3(3-0)**

The course provides an in-depth understanding of the international luxury fashion industry and the unique aspects involved in managing luxury fashion brands. This course may be offered in an online or hybrid format. Prerequisites: 56 credit hours completed; 18 credits of FMD coursework completed; or graduate standing.

**FMD 545 Advanced Draping 3(0-6)**

Advanced interpretation of garment designs developed through the draping on dress forms. Prerequisites: FMD 345 or graduate status.

**FMD 546 Experimental CAD for Fashion 3(1-3)**

Creative use of CAD software as applied to standards prevalent in the design, manufacture or presentation of fashion goods. This course may be offered in an online format. Prerequisite: FMD 246 or graduate standing.

**FMD 547 Functional Apparel Design 3(2-2)**

A systematic approach to apparel design integrating knowledge of the needs and functions of the wearer, the structural properties of textiles and apparel design. Prerequisites: FMD 241, FMD 345, FMD 355.

**FMD 550 Global Apparel Supply Chain Management 3(3-0)**

Global Textile and apparel trading systems from the perspective of their operational issues including global business process applications, apparel supply chain management and global logistics. This course may be offered in an online or hybrid format. Prerequisites: 56 semester hours with at least 12 hours in apparel merchandising and design courses including FMD 401.

**FMD 555 Electronic Textiles 3(1-3)**

Offers fundamentals of developing smart textiles by integrating textiles and electronics. Includes hands-on projects such as fabric optics and bio-signal monitoring using embedded electronics. Prerequisites: FMD 155 and 246, or graduate standing.

**FMD 556 Advanced Visual Merchandising 3(1-3)**

Advanced practice of Visual Merchandising. Creative window and store interior display work. Use of 3D printing for prop and fixture design. Focus on portfolio development. This course may be offered in an online or hybrid format. Prerequisite: FMD 356, and 60 completed credit hours, or graduate standing.

**FMD 560 Apparel Product Development 3(1-3)**

Analysis of the apparel production process, including quality issues relative to development and production of ready-to-wear apparel. This course may be offered in an online format. Prerequisite: FMD 401; Pre/co-requisites: For Fashion Design Concentration: FMD 447; For Fashion Merchandising Concentration: FMD 332, 410, 510.

**FMD 565 3D Printing and Fashion 3(1-3)**

Creative exploration of 3D printing as a tool for fashion product innovation and development. Use of varied modeling software applications. This course may be offered in an online format. Prerequisite: FMD 330 or graduate standing.

**FMD 597 Special Topics in Fashion Merchandising and Design 1-15(Spec)**

Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student's transcript. Prerequisite: See Course Search and Registration.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**FMD 604 Research in Textiles and Apparel 3(3-0)****FMD 608 Historical Fashion Studies 3(3-0)****FMD 619 Continuing Registration for Final Research Project 1(1-0)****FMD 635 Advanced Internship in Textiles and Apparel 1-6(Spec)**

**FMD 640 Anthropometrics and Apparel 3(2-2)****FMD 641 Apparel Presentation Technology 3(2-2)****FMD 655 Textile Product Evaluation 3(2-2)****FMD 656 Fashion Retail Technology 3(3-0)****FMD 697 Special Topics in Fashion Merchandising and Design 1-15(Spec)****FMD 790 Independent Study in Fashion Merchandising and Design 2-6(Spec)****FMD 796 Creative Scholarship 1-6(Spec)****FMD 797 Special Topics in Fashion Merchandising and Design 1-15(Spec)****FMD 798 Thesis 1-6(Spec)****FRN - French**

See the Department of History, World Languages, and Cultures for more information.

**FRN 101 Elementary French I 4(4-0)**

Designed for students who have had no French. Basic language skills. Introduction to the cultures of French-speaking countries. Students who have had previous preparation in French are required to take a placement test. This course may be offered in an online format. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**FRN 102 Elementary French II 4(4-0)**

Basic language skills. Continuation of FRN 101. This course may be offered in an online format. Recommended: FRN 101. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**FRN 105 Accelerated Elementary French 4(4-0)**

Intended for students with high school or other preparation in French who are not ready to begin Intermediate French. Combines FRN 101 and 102. Students with previous preparation in French are required to take a placement exam. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**FRN 110 Study Abroad 1-8(Spec)**

Intended for students studying French abroad at the beginning level. Prerequisite: Permission of instructor.

**FRN 125 France's Gastronomies 3(3-0)**

A cultural history of gastronomic traditions within France, their influence on global foodways, as well as contemporary debates around food within France. This course is taught in English. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**FRN 201 Intermediate French I 4(4-0)**

Review of grammar and further development of all language skills. May be offered as Writing Intensive. Recommended: FRN 102. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**FRN 202 Intermediate French II 4(4-0)**

Review of grammar and further development of all language skills. May be offered as Writing Intensive. Recommended: FRN 201. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**FRN 210 Study Abroad 1-18(Spec)**

Intended for intermediate students studying abroad. Prerequisites: FRN 102.

**FRN 310 Study Abroad 1-18(Spec)**

Intended for advanced students studying abroad. Prerequisites: FRN 202; permission of instructor.

**FRN 315 Conversation and Composition I 3(3-0)**

Building advanced communicative skills in French through practical composition and conversation. Refinement of grammar. Recommended: FRN 202.

**FRN 316 Conversation and Composition II 3(3-0)**

Building advanced communicative skills in French through practical composition and conversation. Refinement of grammar. Recommended: FRN 202.

**FRN 320 French Civilization 3(3-0)**

A study of various aspects of French culture from its beginnings through the nineteenth century. Recommended: FRN 202.

**FRN 321WI France Today 3(3-0)**

Various aspects of the political, social, economic, intellectual, artistic, and literary life of contemporary France. Writing Intensive. Recommended: FRN 202.

**FRN 325 French Literature in Translation 3(3-0)**

Interpretation and discussion of representative works of French-language literature from France and the Francophone world with a focus on their social and cultural context. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**FRN 330 Survey of French Literature (Beginning to 1800) 3(3-0)**

Develops acquaintance with the literature of France from the Middle Ages to 1800 through selections from representative authors; may be organized around a theme. Recommended: FRN 202.

**FRN 331 Survey of French Literature (1800 to Present) 3(3-0)**

General acquaintance with the literature of France from 1800 to the present. Selections from representative authors; may be organized around a theme. Recommended: FRN 202.

**FRN 333 Francophone Literature and Culture 3(3-0)**

This course examines Francophone prose, poetry and film selections. May be offered as Writing Intensive. Recommended: FRN 202.

**FRN 335 French for the Professions 3(3-0)**

Acquisition of vocabulary, cross-cultural awareness, and communicative skills related to professions including diplomacy, international business, global development organizations, medical professions, fashion, and tourism industries. Recommended: FRN 202.

**FRN 340 Foreigners in France in the 20th and 21st Centuries 3(3-0)**

An examination of 20th and 21st century immigration waves in France as depicted in historical and literary texts as well as in films. May be offered as Writing Intensive. Recommended: FRN 202.

**FRN 350 Topics in French and Francophone Film 3-6(3-0)**

A study of selected topics in French-language film within the context of French and francophone cultures. May be repeated as long as the topics differ. Recommended: FRN 202.

**FRN 353 Youth Literature in French 3(3-0)**

An examination of selected children's and young adult literature from France and the Francophone world. May be offered as Writing Intensive. Recommended: FRN 202.

**FRN 360 Literature and Culture of Quebec 3(3-0)**

A study of various aspects of Quebec society and a few of Quebec's major writers. May be offered as Writing Intensive. Recommended: FRN 202 or the equivalent.

**FRN 370 French Pronunciation and Diction 3(3-0)**

Study of phonetics and practice of intonation and pronunciation patterns. Recommended: FRN 202.

**FRN 375 French/English Translation 3(3-0)**

Introduction to the theory, practice and history of translating French to English. May be offered as Writing Intensive. Recommended: FRN 202.

**FRN 391 Topics in French and Francophone Cultures 1-12(Spec)**

Topics of interest in French and francophone literature and civilization. Students may repeat the course as long as the topic differs. May be offered as Writing Intensive. Recommended: FRN 202.

**FRN 410 Study Abroad 1-12(Spec)**

Intended for advanced students studying abroad. Prerequisites: 6 hours of French at the 300 level; permission of instructor.

**FRN 411 Practicum in Teaching French 3(2-1)**

Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting materials for secondary-level classrooms. Practical experience through mini-teaching situations. Prerequisites: Two 300-level courses; passing the competency test; departmental permission.

**FRN 412 Practicum: Secondary Field Experience 1(Spec)**

Pre-student teaching experience in middle or high school teaching situation. CR/NC only. Co-requisite: FRN 411.

**FRN 421 Foreign Language in Elementary Schools 1(1-0)**

Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting materials for the elementary school classroom. Practical experience through mini-teaching situations. Co-requisites: FRN 411.

**FRN 422 Practicum: Elementary Field Experience 1(Spec)**

Pre-student teaching experience in elementary school teaching situation. CR/NC only. Co-requisite: FRN 421.

**FRN 423WI France at War in the 20th Century 3(3-0)**

From the late 19th-century roots of World War I through the aftermath of the Algerian War, this course examines representations of France's major 20th-century conflicts. Writing Intensive. Recommended: Two 300-level French courses.

**FRN 460 Topics in Quebec Studies 3(3-0)**

Advanced study of a specific theme or topic in French-language literature, culture, or society from Quebec. May include French-Canadian topics outside Quebec. Prerequisite: one 300-level FRN course.

**FRN 510 Study Abroad 1-12(Spec)**

Intended for advanced undergraduate and graduate students studying abroad. Prerequisites: 6 hours of French at the 400 level; permission of instructor.

**FRN 531 Practicum in French Stylistics 3(3-0)**

Study and analysis of composition and style. Recommended: FRN 315, FRN 316; 6 additional FRN credit hours in courses 300 or above.

**FRN 591 Advanced Topics in French and Francophone Cultures 1-6(Spec)**

Advanced study of topics of interest in French and francophone literatures and civilizations. Credit hours vary; may be repeated for different topics. Prerequisite: 6 FRN credit hours at the 300-level or above.

**FRN 597 Independent Study 1-6(Spec)**

The in-depth study of a topic under the direction of a faculty member who together with a student designs the format of the study. Prerequisites: At least 6 FRN credit hours at the 300 level or above; permission of the instructor and department chairperson.



## FYE - First Year Experience

See First Year Experience under the Special Studies section for more information.

### FYE 101 First Year Experience 1(1-0)

Provides an understanding of the university environment, value of learning, career guidance and student responsibilities. This course is approved for offering in an online or hybrid format. Prerequisite: only open to students in their first year at CMU.

### FYE 301 Mentor First-Year Experience 3(2-2)

This course provides a theoretical foundation, practical knowledge and skill development for the role of First-Year Experience (FYE 101) Mentor.

## GEL - Geology

See the Department of Earth and Atmospheric Sciences for more information.

### GEL 100 Introduction to Earth Systems 3(2-2)

An introductory exploration of the Earth system in the context of global change. Topics include the rock cycle, geologic time, climate change, and plate tectonics. Satisfies University Program Group II laboratory requirement. Credit may not be earned in both GEL 100 and GEL 130QR, GEL 101, GEL 102, or GEL 105. (University Program Group II-A: Descriptive Sciences)

### GEL 101 Physical Geology 3(3-0)

An introduction to the surficial and internal earth processes that shape our world. Topics include plate tectonics, rock cycle, volcanoes, geologic time and climate change. Credit may not be earned in both GEL 101 and GEL 100, GEL 105, or GEL 130. (University Program Group II-A: Descriptive Sciences)

### GEL 102 Physical Geology Laboratory 1(0-2)

Laboratory study of minerals, rocks, maps, and geologic processes. Satisfies University Program Group II laboratory requirement. Credit may not be earned in GEL 102 and GEL 100 or GEL 130. Pre/Co-Requisite: GEL 101 or GEL 105. (University Program Group II-A: Descriptive Sciences)

### GEL 105 Dangerous Planet 3(3-0)

A survey of the socially important geological topics that affect people and their environment with a focus on natural and anthropogenic geologic hazards. Credit may not be earned in both GEL 105 and GEL 100, GEL 101, or GEL 130QR. (University Program Group II-A: Descriptive Sciences)

### GEL 130 Sustainable Earth: Geology for the 21st Century 3(2-2)

Our planet is in peril! Investigations of processes essential for a sustainable Earth. Availability, quality, and responsible extraction of water, energy, and solid materials. Satisfies University Program Group II laboratory requirement. Credit may not be earned in both GEL 130 and GEL 100, GEL 101, or GEL 105. (University Program Group II-B: Quantitative and Mathematical Sciences)

### GEL 201 Earth History 3(2-2)

The Earth's history as revealed in the rock record. Geologic processes and concepts are applied to the evolution of North America and life through geologic time. Field trip fee required. Prerequisites: One of: GEL 100; or GEL 101, GEL 102; or GEL 130QR.

### GEL 205 Oceanography 3(3-0)

Introduction to the properties and movements of ocean waters; to marine life, the ocean floors, and the effects of the oceans on humans. This course may be offered in an online or hybrid format. Identical to GEO 205, credit may not be earned in both courses. (University Program Group II-A: Descriptive Sciences)

### GEL 230 Prehistoric Life 3(3-0)

An introduction to the history of life on Earth. Topics include geologic time, plate tectonics, evolution, origin of life, and the evolutionary history of vertebrates. (University Program Group II-A: Descriptive Sciences)

### GEL 270 Field Methods 2(0-4)

An introduction to methods of geologic investigation in the field including geographic positioning, observations, measurements, sampling, data processing, and geologic map-making. Field trip fee required. Prerequisite: Math Competency. Pre/Co-requisite: GEL 201. Recommended: MTH 132.

### GEL 277 Research and Communication Skills in Geosciences 1(0-2)

A focus on effective scientific research and communication skills necessary to succeed in geoscience careers. Prerequisites: Oral Competency; ENG 101; one of: GEL 100; or GEL 101; or GEL 102, GEL 105; or GEL 130QR.

### GEL 280 Geomath 3(2-3)

Students learn to solve geoscience-specific problems through application of quantitative methods, graphs, and spreadsheets. Prerequisites: MTH 132; One of: GEL 100; or GEL 101, GEL 102; or GEL 130.

### GEL 285 Earth Systems Science for Elementary Teachers 3(2-2)

Inquiry based survey of Earth systems (solid Earth, surface, and atmospheric) tailored to students pursuing a degree in Elementary Education. Quantitative skills are emphasized. Identical to GEO 285. Credit may not be earned in more than one of these courses. Satisfies University Program Group II laboratory requirement. Recommended: PHS 265, CHM 265. (University Program Group II-B: Quantitative and Mathematical Sciences)

### GEL 305 Engineering Geology 3(2-2)

Application of geologic processes and quantitative methods to analyze engineering problems involving soils, rocks, surface water and groundwater. Prerequisites: One of: GEL 280 or ENS 401 or junior standing with a signed major in EGR; PHY 145QR. Recommended: PHY 146.

### GEL 308 Hydrologic Processes 3(3-0)

Study of water on Earth; includes atmosphere, surface, and subsurface. Explore interactions between the hydrosphere, biosphere, earth system, and human processes. Prerequisites: GEL 101 or GEL 105 or GEL 100 or GEL 130 or MET 140 or MET 260 or ENS 101QR; MTH 105 or MTH 107 or MTH 109 or MTH 113 or MTH 130 or MTH 132 or MTH 133. Recommended: GEL 280 or CPS 106; familiarity with spreadsheet software (i.e., Microsoft Excel or similar) is expected.

### GEL 310 Introductory Mineralogy and Petrology 4(2-5)

Introduction to mineral science and rock-forming processes. Characterization, identification, and classification of minerals, igneous rocks, and metamorphic rocks. Earth materials in context of plate tectonics. Field trip fee required. Prerequisites: GEL 101, GEL 102; or GEL 100; or GEL 130QR. Pre/Co-requisites: GEL 270; CHM 131. Recommended: GEL 280.

### GEL 320 Earth Materials and Resources 3(2-3)

Interpretation and identification of natural materials including minerals, rocks, and various energy resources, their geological origin, extraction, and environmental impact of their usage. For nongeology majors. Prerequisites: One of: GEL 100; or GEL 101, GEL 102; or GEL 105, GEL 102; or GEL 130QR. Pre/Co-requisites: GEL 201 or GEL 230.

### GEL 340 Stratigraphy and Sedimentology 4(3-3)

Production, transport, and deposition of sediments. Emphasis on fundamentals of fluid flow, transport, mineral processes, physical properties, formation of sedimentary structures, and depositional environments. Field trip fee required. Pre/Co-requisites: One of: GEL 310; or GEL 320; or ENS 307.

### GEL 370 Structural Geology 3(2-3)

Theoretical and applied study of structures developed by deformation of the Earth's crust and their tectonic environment. Field trip fee required. May be offered as Writing Intensive. Pre/Co-requisites: GEL 277, GEL 340.

### GEL 372 Introduction to Geophysics 3(2-3)

Students learn about geophysical techniques used to study physical properties and structure of the Earth. Field trip fee required. Prerequisites: GEL 280 or ENS 401; PHY 145QR. Recommended: PHY 146.

### GEL 375 Special Problems in Geology 1-6(Spec)

Various special topics in geology that are not included in existing courses. Specific topic will be listed on student's transcript. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisite: See course search and registration.

### GEL 380WI Hydrogeology 4(3-3)

Introduction to the study of groundwater: groundwater occurrence and flow, groundwater in the hydrological cycle, groundwater quality and pollution, groundwater exploration, evaluation, and management. Field trip fee required. Writing Intensive. Prerequisites: One of: GEL 100; or GEL 101, GEL 102; or GEL 130; or ENS 101; MTH 132 with a C- or better. Recommended: GEL 280.

### GEL 385 Introductory Petroleum Geology 3(2-2)

Petroleum deposits of the earth: location, origin, and occurrence. Technical aspects of exploration and production, emphasizing petroleum and natural gas formations of Michigan. May be offered as Writing Intensive. Pre/Co-requisites: GEL 340 or GEL 380WI.

### GEL 386 Subsurface Geological Methods 3(2-2)

Subsurface investigation and analytical methods applied to geological and environmental problems such as water and energy resources or environmental contamination and remediation. Prerequisites: Junior or senior standing with 12 credit hours in GEL, EGR, and/or ENS courses. Recommended: GEL 340, EGR 408, or ENS 307; GEL 380WI.

### GEL 389 Well Construction and Design 1(1-0)

Protocols for design and construction of groundwater monitoring and production wells in accordance with ASTM standards and national guidelines. Identical to ENS 389. Credit may not be earned in more than one of these courses. Prerequisite: GEL 380WI.

### GEL 397 Independent Study 1-3(Spec)

Self-directed students explore special topics and/or conduct a research project with instructor's guidance. Laboratory and/or field safety training may be required. May be offered as Writing Intensive. Prerequisites: GEL 277 and permission of instructor.

### GEL 406WI Senior Thesis 3-6(Spec)

The student conducts a senior-level research project, writes a thesis, and gives an oral presentation with guidance from a thesis advisor. Typically completed within 3 hours per semester. Repeatable up to 6 hours to finalize proposed outcomes. Only 3 hours may be credited towards the writing intensive requirement. Writing Intensive.

### GEL 409 Professional Development in the Fields of Environmental Science and Geoscience 1(0-2)

Preparation for entry into the fields of Environmental Science and Geoscience. Identical to ENS 409. Credit may not be earned in more than one of these courses. Pre/Co-requisite: ENS 401 or GEL 340.

### GEL 413 Geomorphology 3(2-2)

Geologic approach to geomorphology with emphasis on quantitative analysis, dynamics of landform evolution, and use of geomorphology in solving geologic problems. Field trip fee required. Prerequisites: GEL 310 or GEL 320; MTH 132. Recommended: GEL 280.



**GEL 420 Applied Geostatistics 3(2-2)**

Application of geostatistical methods to various scientific and engineering domains. Emphasis on analyzing and interpreting spatial data. Kriging, variography and simulation methods. Prerequisites: GEL 270, GEL 280; GEO 203QR. Recommended: GEO 303 or GEO 308; MTH 223; STA 382.

**GEL 444 Preparation for ASBOG Fundamentals of Geology Exam 1(1-1)**

Review and preparation for the Association of State Boards of Geology (ASBOG) Fundamentals of Geology (FG) Examination. ASBOG exam fee required. Pre/co-requisites: GEL 340, GEL 370; Prerequisite: senior standing. Recommended: GEL 450.

**GEL 450 Geology Field Camp 4-6(Spec)**

Capstone field experience including geologic mapping and interpreting the tectonic history of complex terrains based on geographic, structural, and lithological data. Field camp fee required by external institution. Must receive a C- or better or the equivalent to transfer to CMU. Prerequisites: GEL 340, 370; approval of geology advisor. Recommended: GEL 523.

**GEL 502 Geochemistry of Natural Waters 3(2-3)**

Geochemical processes governing the chemistry of water, with a focus on the distribution of natural and anthropogenic chemical species. Prerequisite: CHM 132 or CHM 141; or graduate standing. Pre/Co-requisite: BIO 320 or CHM 351 or GEL 340 or ENS 323 or EGR 305; or graduate standing.

**GEL 509 Applied Hydrologic Modeling 3(2-3)**

Design, construction, calibration, history matching, and verification of hydrologic models including rivers and watersheds, groundwater, and lakes. Prerequisites: GEL 380WI and GEL 308 with a C or better; or EGR 408 with a C or better; or Graduate Standing in a CSE program.

**GEL 512 Stable Isotope Geochemistry 3(2-3)**

Isotope geochemistry applied to geological and environmental problems, including the use of non-traditional isotopes to understand low and high temperature geochemical processes. Prerequisite: CHM 132 or CHM 141; or graduate standing. Pre/Co-requisite: BIO 320 or CHM 351 or GEL 340 or ENS 323 or EGR 305; or graduate standing.

**GEL 523 Advanced Petrology 3(2-3)**

Igneous and metamorphic processes revealed from textural, mineralogical, and quantitative-geochemistry characteristics. Physicochemical-evolution paths of magmas and metamorphic assemblages through quantitative methods. Field trip fee required. May be offered as Writing Intensive. Prerequisite: GEL 310 or graduate standing; Pre/Co-requisite: CHM 132 or PHY 146 or graduate standing.

**GEL 550 Economic Geology 3(2-3)**

Metallic and nonmetallic ore deposits, including critical mineral resources, and their tectonic settings; principles of resource exploration in context of responsible environmental stewardship. Prerequisite: GEL 310 or GEL 320 or graduate standing. Recommended: GEL 523.

**GEL 575 Special Topics in Geosciences 1-6(Spec)**

Special topics and recent developments in geosciences that are not included in existing courses. Specific topic will be listed on student's transcript. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisite: See Course Search and Registration.

**GEL 597 Advanced Independent Study 1-6(Spec)**

Self-directed students conduct an advanced research project with instructor's guidance. An EAS Independent Study proposal form must be completed and signed by student and instructor at the time of enrolling. Laboratory and/or field safety training may be required. Prerequisites: At least 27 credits of geology courses or graduate standing; permission of instructor.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**GEL 650 Geology for Science Teachers 3(2-2)****GEL 750 Scientific Communication 1-4(Spec)****GEO - Geography**

See the Department of Geography and Environmental Studies for more information.

**GEO 105 Physical Geography 3(2-2)**

An introduction to the physical processes of the atmosphere, hydrosphere, lithosphere, and biosphere and the global distribution of climate, soils, and vegetation. Satisfies University Program laboratory requirement. (University Program Group II-A: Descriptive Sciences)

**GEO 120 Digital Earth: Understanding Environmental Change Using Maps 3(3-0)**

An introduction to the use of maps to observe, describe, and analyze environmental change due to natural and human causes. (University Program Group II-A: Descriptive Sciences)

**GEO 121 Human Geography and Globalization 3(3-0)**

This course is an introduction to human geography that provides geographical perspectives on population, the economy, politics, urbanization, and culture. This course may be offered as writing intensive. (University Program Group III-B: Studies in Social Structures)

**GEO 201 Weather and Climate 3(2-2)**

Nature of atmospheric processes, weather, and climate – why and how they vary over the surface of the Earth and related human influences and impacts.

**GEO 203QR Introduction to Geographic Information Science 3(2-2)**

Fundamentals of geographic information science - including spatial data gathering, measurement, classification, analysis, display and map interpretation. Current computer mapping technologies are used in laboratory. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Science)

**GEO 205 Oceanography 3(3-0)**

Introduction to the properties and movements of ocean waters; to marine life, the ocean floors, and the effects of the oceans on humans. This course may be offered in an online or hybrid format. Identical to GEL 205; credit may not be earned in both courses. (University Program Group II-A: Descriptive Sciences)

**GEO 210 Landforms 3(2-2)**

Study of geomorphic processes affecting the evolution and distribution of landforms; quantitative study of the regional physical landscape; analysis of human-landscape interactions. Prerequisite: GEO 105 or GEL 101 or 100 or 105 or 130.

**GEO 280 Drone Regulations 2(2-1)**

Introduces students to unmanned aerial systems (drone) technology, safe mission management, and FAA regulations for Part 107 certification. Identical to BCA 280. Credit may not be earned in more than one of these courses. This course may be offered in a hybrid or online format. Recommended: MTH 105 or higher.

**GEO 285 Earth Systems Science for Elementary Teachers 3(2-2)**

Inquiry based survey of Earth systems (solid Earth, surface, and atmospheric) tailored to students pursuing a degree in Elementary Education. Quantitative skills are emphasized. Identical to GEL 285. Credit may not be earned in more than one of these courses. Satisfies University Program Group II laboratory requirement. Recommended: PHS 265, CHM 265. (University Program Group II-B: Quantitative and Mathematical Sciences)

**GEO 300 Research Methods in Geography 3(3-0)**

Introduction to skills geographers use to conduct research. Examines major methods geographers use for obtaining, analyzing, and interpreting data. Prerequisites: 9 credit hours completed in GEO major/minor, or ENV major.

**GEO 303 Geographic Information Systems 3(2-2)**

Concepts and applications of geographic information systems (GIS). Acquiring, organizing, managing, and analyzing geographic data; visualizing and communicating geographic information. Prerequisite: GEO 203QR.

**GEO 308 Fundamentals of Remote Sensing 3(2-2)**

Introduction to the fundamental principles and applications of remote sensing of the Earth. Prerequisite: GEO 203QR. Recommended: One of: GEO 105, 120QR, ENS 101QR, GEL 130.

**GEO 310 Surface Hydrology 3(2-2)**

The course deals with stream waters and their alteration of the landscape. Stresses the interaction of water, land and human activity. Prerequisite: GEO 210.

**GEO 312 Geography of Contemporary Global Issues 3(3-0)**

Geographical analysis of contemporary global issues, including immigration, climate change, resource disputes, geopolitics and matters of race, gender, and class. Prerequisites: GEO 120QR or 121WI.

**GEO 315 From Farm to Table: Food Systems in a Changing World 3(3-0)**

Study of foodscapes, world cuisines, urban and rural consumption of agricultural commodities emphasizing problems associated with food provisioning, and environmental impacts on agricultural regions. Prerequisite: Sophomore or higher standing. Recommended: One of the following: GEO 120, GEO 121, GEO 105, ENV 101.

**GEO 317 Economic Geography 3(3-0)**

Principles and theories of economic geography, the global interrelationships of regional and local economic activities, and the effects of technology on spatial economic structures. Prerequisite: sophomore standing. Recommended: GEO 121, or at least 3 credits in BUS, FIN, ECO, or MKT. (University Program Group III-B: Studies in Social Structures)

**GEO 320 Population Geography 3(3-0)**

Spatial patterns of fertility, mortality, and migration, and the processes underlying those patterns. Population growth, distribution, problems and policies. This course may be offered in an online or hybrid format. Prerequisite: GEO 121 or junior standing.

**GEO 325 Resiliency of Socio-Ecological Systems 3(3-0)**

Analysis of how socioecological concepts and practices of resilience have changed through time, and the role of societal networks in shaping these changes. Prerequisite: One of: GEO 121, GEO 317, GEO 105, GEO 120QR, ENV 101, ENS 101QR, SOC 100, JRN 203QR.

**GEO 330 Natural Resource Conflicts and Sustainable Development 3(3-0)**

Examination of causes and consequences of conflicts around natural resources, historical and contemporary. Analysis of sustainable development as a tool to reduce natural resource conflict. Prerequisites: GEO 121 or ENV 101 or junior standing. Recommended: Intro-level physical geography, geology, or environmental science course.

**GEO 331 Introductory Urban Planning 3(3-0)**

Study of urban planning history, concepts, and techniques. Evaluate the structure and practice of contemporary urban planning. Prerequisites: sophomore standing and 3 credit hours in GEO, PSC, ENV or FIN. Recommended: GEO 203QR.

**GEO 332 American Landscapes 3(3-0)**

Landscapes reflect culture, environmental interactions, and land use. Emphasis on the form, function, and spatial pattern of professionally planned and ordinary landscapes alike. Prerequisite: ENV 101 or GEO 120QR or 121 or 331 or HST 302 or 319.

**GEO 334 Soil Science 3(2-2)**

A lecture/field course introducing the physical, chemical, and biotic properties of soils, soil classification and mapping, and soil resource issues. Identical to BIO 334. Credit may not be earned in more than one of these courses. Prerequisites: CHM 120 or 131; one of the following: GEO 105, GEL 100, GEL 101, GEL 105, GEL 130QR, ENS 101QR; or BIO 212, BIO 213 both with a C- or better.

**GEO 335 Applied Conservation Geography 3(3-0)**

Applied biogeographical perspectives of biological conservation – ecosystem spatial distribution and change; spatial metrics and landscape management strategies that promote conservation; protected areas designations and design. Prerequisites: GEO 203QR; One of the following: BIO 111, ENS 101QR, GEO 105, GEO 120, or ENV 101.

**GEO 340 Urban Geography 3(3-0)**

The rise of cities and urbanization. Human use of urban space. The city as environment. Prerequisite: GEO 121 or junior standing.

**GEO 342 Historical Geography 3(3-0)**

An overview of US and world history from geographic and ecological perspectives, focusing on the expansion/contraction of empires, spatial interactions, and technology/resources. Prerequisites: Junior standing, 12 hours of geography and/or history.

**GEO 345 Political Geography 3(3-0)**

Areal characteristics and territorial problems of states, including internal regional relations, border disputes, and colonial areas. Selected world problems. Recommended: GEO 121.

**GEO 346 Geography of the Developing World 3(3-0)**

A geographic analysis of the developing world focusing on processes of environmental, demographic, and socioeconomic change, particularly since World War II. Prerequisite: 9 hours of social science courses or junior standing.

**GEO 350 United States and Canada 3(3-0)**

Geography of the United States and Canada in the context of economic, cultural and environmental connections. Prerequisite: 6 credits in GEO, BIO, ECO, EDU, HST, PSC, or SOC, or junior standing.

**GEO 355 Environmental Catastrophes 3(3-0)**

Causes and societal impacts of natural and human-induced environmental catastrophes such as fires, explosions, infrastructure failures, industrial pollution, and interaction of natural disasters and human-environment. Prerequisite: One of following: ENV 101, ENS 101QR, GEO 120QR, SEP 300QR.

**GEO 360 Gender and Geography in the Midst of Globalization 3(3-0)**

*Geographical analysis of patterns associated with the understanding, representation, and treatment of gender across cultures and regions in the midst of globalization. Prerequisite: Sophomore standing. (University Program Group IV-A: Studies in Discrimination)*

**GEO 365 A Geography of Modern Europe 3(3-0)**

Geographic characteristics of the continent, its regions, and economic and political systems since WWII. National characteristics of culture, human/land relationships and international involvements. Recommended: GEO 121; junior standing. Although no prerequisites are expected, students should be familiar with concepts common to geography, regional and social sciences.

**GEO 373 Latin America 3(3-0)**

*Geographic characteristics of Latin America from colonization to present. Regions are interpreted by analysis of geographical elements and their interrelationships. Pre/Co-requisite: GEO 105 or GEO 121 or sophomore standing. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**GEO 375 Special Topics in Geography 1-9(Spec)**

See course search and registration.

**GEO 385 China: Environment and People 3(3-0)**

*China's physical environment and the geographic patterns of social, political, and economic processes. China's dynamic roles in world geopolitics and global economy. Prerequisite: GEO 121 or junior standing. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**GEO 395 Michigan 3(3-0)**

Geographic analysis of the interrelationships between Michigan's geomorphology, biogeography, climate, resource use and protection, agriculture, land division, transportation, demography, economic and urban development. Prerequisite: Junior standing.

**GEO 397 Independent Study 1-6(Spec)**

Exploration of topics in geography agreed upon by student and instructor. Only 1-3 credits can be earned within one registration period. Prerequisite: at least 9 hours of Geography credits.

**GEO 400 Geographic Education 3(2-2)**

Study of Geography in the K-12 curriculum including relevant teaching methods, state content standards, and strategies for teaching diverse students. May be offered as Writing Intensive. Prerequisites: junior standing; 12 hours of geography or social sciences.

**GEO 404 Global Positioning System 1(1-0)**

Introduction to the Global Positioning System, system operation, data capture, mission planning and data import to Geographic Information Systems (GIS). Prerequisites: GEO 203, 303. CR/NC option available.

**GEO 431 Urban Planning Capstone 3(3-0)**

Provides students with a comprehensive understanding of land use issues, processes and solutions. Integrates innovative urban planning concepts with advanced analytic tools. May be offered as Writing Intensive. Prerequisites: GEO 331, GEO 203QR and senior standing.

**GEO 450WI Geography Capstone 3(2-2)**

This capstone course solidifies advanced-level understanding of the discipline of Geography. Students apply geographic knowledge and methods to an advanced-level research project. Writing Intensive. Prerequisites: Senior standing with a minimum of 21 credits completed in the major.

**GEO 500 Advanced Cartography 3(2-2)**

Advanced methods and theories concerning the field of cartography including: cartographic communication and visualization, digital map compilation and multivariate data representation. Prerequisite: GEO 303 or graduate standing.

**GEO 501 Principles of Geographic Information Systems 3(2-2)**

Fundamentals of GIS and its applications in environmental, social and economic analysis (for nongeography majors or minors only). Prerequisites: GEO 203 or senior standing or graduate standing.

**GEO 503 Advanced Geographic Information Systems 3(2-2)**

Advanced techniques of geospatial analysis, with applications in social and environmental systems. Prerequisites: GEO 303, 308; or GEO 501; STA 282 or 382 or BIO 500.

**GEO 505 Mapping and Surveying Technology: CAD, GPS, and UAS 3(2-2)**

Concepts and practice of professional mapping technology including 2-dimensional ComputerAided Design (CAD), Global Positioning Systems (GPS), and Unmanned Aerial Systems (UAS), and integration between technologies. Prerequisites: GEO 203QR, 303, 308; or GEO 501.

**GEO 508 Applications of Remote Sensing 3(2-2)**

Applications of active and passive remote sensing to investigate patterns and processes of the environment. Prerequisites: GEO 303, 308; or GEO 501. Prerequisites/Co-requisites: STA 282 or 382 or BIO 500.

**GEO 510 Python Programming for GIS 3(2-2)**

Review of programming basics, Python scripting syntax and library modules, accessing software APIs, automating the workflow of GIS tasks, and creating GIS application tools. Prerequisites: CPS 180, GEO 303 or GEO 308; or GEO 501; or graduate standing in M.S. GIS program.

**GEO 512 Quantitative Methods for Spatial Analysis 3(2-2)**

Statistical techniques for solving spatial problems. Descriptive and inferential spatial statistics. Spatial pattern analysis. Regression modeling with spatial data. Prerequisites: GEO 303, STA 382; or GEO 501, graduate standing in the Data Mining or Health GIS certificate program; or graduate standing in the MS GIS program.

**GEO 513 Geographic Information Systems for Social Sciences 3(2-2)**

Spatial data visualization and analysis using Geographic Information Systems (GIS) with emphasis on application to social sciences, planning, public policy, and business research. Prerequisite: GEO 303 or GEO 501.

**GEO 515 Environmental Management and Policy 3(3-0)**

Examination of the interrelationships between decision-makers, stakeholders, and the environment for issues spanning local to international scales. Prerequisite: ENV 310, GEO 331 or graduate standing.

**GEO 528 Environmental Modeling with GIS 3(2-2)**

GIS model design and implementation as directed towards environmental issues. Raster data models, concepts, structure, functions, examples, and modeling capabilities are explored. Prerequisites: GEO 203, 303 and 305; or GEO 501. Recommended: GEO 503.

**GEO 540 Health Data Visualization 3(2-2)**

Theories and techniques of geo-visualization for health data analysis and information communications. Prerequisite: GEO 303 or GEO 501.

**GEO 553 GIS Operations and Practices 3(3-0)**

Practices and procedures utilized by professionals in the implementation and maintenance of large-scale GIS operations. Prerequisites: GEO 503 or Graduate Status in the MS GISci Program.

**GEO 575 Special Studies in Geography 1-6(Spec)**

See course search and registration.

**GEO 591 Internship 1-12(Spec)**

Experiences in applying geographic techniques to environmental analysis, resource management, and business applications. Up to 3 hours of internship credit can be applied to the geography/earth science major. A full-time internship position for one semester may qualify for 12 hours of credit. Prerequisite: permission of program advisor.

**GEO 597 Independent Study 1-9(Spec)**

Qualified students may explore self-directed geographic and environmental topics of special interest with faculty guidance. Prerequisites: At least 12 hours of GEO or ENV credits or graduate standing and completion of Geography and Environmental Studies Departmental independent study approval form and approval by Geography and Environmental Studies Chairperson.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**GEO 600 Dynamic Mapping and Geospatial Visualization 3(2-2)**  
**GEO 601 Special Topics in Advanced GIS Theories and Methods 3-6(2-2)**  
**GEO 602 Special Topics in Advanced GIS Applications 3-6(2-2)**  
**GEO 603 GIS Design and Programming 3(2-2)**  
**GEO 608 Topics in Advanced Remote Sensing 3(2-2)**  
**GEO 615 Research Design and Communication in GIS 1-4(Spec)**  
**GEO 619 Continuing Registration for Final Research Project 1(1-0)**  
**GEO 701 Spatial Data Management 3(2-2)**  
**GEO 797 Directed Research in Geographic Information Sciences 1-6(Spec)**  
**GEO 798 Thesis 1-6(Spec)**

## GER - German

See the Department of History, World Languages, and Cultures for more information.

**GER 101 Elementary German I: Language and Culture 4(4-0)**  
*Designed for students who have had no German. Basic language skills. Introduction to the culture of German-speaking countries. Students who have had previous preparation in German are required to take a placement exam. This course may be offered in an online format. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**GER 102 Elementary German II: Language and Culture 4(4-0)**  
*Continuation of GER 101. Basic language skills. Introduction to the culture of German-speaking countries. Students with previous German experience must take a placement exam. Course may be offered in an online format. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**GER 105 Accelerated Elementary German 4(4-0)**  
*Intended for students with high school or other preparation in German who are not ready to begin Intermediate German. Combines GER 101 and 102. Students with previous preparation in German are required to take a placement exam. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**GER 110 Study Abroad 1-8(Spec)**  
*Intended for students studying abroad at the beginner level. Prerequisite: Permission of instructor.*

**GER 201 Intermediate German I 4(4-0)**  
*Review of grammar and further development of all German language skills. This course may be offered in an online format. Recommended: GER 102. (University Program IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**GER 202 Intermediate German II 4(4-0)**  
*Review of grammar and further development of all German language skills. This course may be offered in an online format. Recommended: GER 201. (University Program IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**GER 210 German Language Study Abroad 1-12(Spec)**  
*Intended for students studying abroad at the intermediate level. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**GER 310 Study Abroad 1-12(Spec)**  
*Intended for students of German studying abroad at the advanced level. Prerequisite: Permission of instructor.*

**GER 311 Advanced German I 3(3-0)**  
*Study of standard High German using current conversational and literary sources. Designed to improve oral and written language skills. Required for majors and minors. Recommended: GER 202.*

**GER 312 Advanced German II 3(3-0)**  
*Study of standard High German using current conversational and literary sources. Designed to improve oral and written language skills. Required for majors and minors. Recommended: GER 202.*

**GER 325 Modern German Literature in Translation 3(3-0)**  
*Interpretation and discussion of representative works by modern German-speaking writers with a focus on their views of contemporary society. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)*

**GER 335 The Culture of the German Economy 3(3-0)**  
*Development of proficiency through readings, discussions, and translations dealing with the culture of the German economic system and Germany in world trade. Taught in German. Prerequisite: GER 312.*

**GER 336 The Culture of German Business 3(3-0)**  
*Development of proficiency through readings, discussions, and translations dealing with key areas of the German business culture such as management, marketing and corporate hierarchies. Taught in German. Prerequisite: GER 312.*

**GER 341 German Cultural History I 3(3-0)**  
*The civilization of Germany and German-speaking areas with emphasis on the social, artistic, philosophical, and literary aspects up to 1890. May be offered as Writing Intensive. Recommended: GER 202.*

**GER 342 German Cultural History II 3(3-0)**  
*The civilization of Germany and German-speaking areas with emphasis on the social, artistic, philosophical, and literary aspects from 1890 to 1945. May be offered as Writing Intensive. Recommended: GER 202.*

**GER 343 Survey of German Literature I 3(3-0)**  
*Survey of the main periods in German literature from Norse/Germanic mythology through the Enlightenment, reading representative authors and works within their social context. May be offered as Writing Intensive. Recommended: GER 202.*

**GER 344 Survey of German Literature II 3(3-0)**  
*Survey of the main periods in German literature from end of the eighteenth century to the early twentieth century, reading representative authors and works within their social context. May be offered as Writing Intensive. Recommended: GER 202.*

**GER 345 Survey of German Literature III 3(3-0)**  
*Survey of the main periods in German literature from the early 20th century to the present, reading representative authors and works within their social context. May be offered as Writing Intensive. Recommended: GER 202.*

**GER 347 German Cultural History III 3(3-0)**  
*Investigation of the cultural history of 'Germany' from post-war division through reunification and after, as seen through a wide variety of texts and other media. May be offered as Writing Intensive. Recommended: GER 202.*

**GER 350 Highlights of German Film 3(3-0)**  
*A survey of German film from the Weimar Republic through the present, with the focus on significant and representative feature films. May be taught in English or German. Counts towards the German major and minor. Recommended: GER 202.*

**GER 370 Advanced Studies in German 1-12(Spec)**  
*Special topics may include language, literature and/or culture. May be repeated when the content is not a duplication of a previous special topics offering. Recommended: GER 202.*

**GER 397 Directed Readings 1-3(Spec)**  
*Offers insight into certain aspects of German literature and civilization, not normally included in regular courses. Prerequisites: 6 hours of 300-level courses; permission of instructor.*

**GER 398 Directed Writing 1-3(Spec)**  
*Students will learn to write different text types (e.g., news articles, short stories, book reviews, etc.). They will improve their grammatical, linguistic, and stylistic skills in written German. Prerequisites: GER 311; permission of instructor.*

**GER 403 German Literature to 1776 3(3-0)**  
*The Middle Ages, Renaissance, Baroque, and the Enlightenment. Modern German translations from Old High German and Middle High German periods. Prerequisite: 6 hours of 300-level courses.*

**GER 405 German Classicism 3(3-0)**  
*The classical age culminating in the works of Goethe and Schiller. The authors' lives, thoughts, and impact on their contemporaries. Prerequisite: 6 hours of 300-level courses.*

**GER 407 German Literature of the Nineteenth Century 3(3-0)**  
*Romanticism, Poetic Realism, and Naturalism through representative authors. Prerequisite: at least 6 hours of 300-level courses.*

**GER 409 German Literature of the Twentieth Century 3(3-0)**  
*Impressionism, Expressionism, Neo-realism, and other current trends. Prerequisite: At least 6 hours of 300-level courses.*

**GER 410 Study Abroad 1-24(Spec)**  
*Intended for advanced students of German studying abroad at the 400-level. Prerequisite: Permission of instructor.*

**GER 411 Practicum in Teaching German 3(2-1)**  
*Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting materials for secondary-level classrooms. Practical experience through mini-teaching situations. Prerequisites: Two 300-level courses; passing the competency test; departmental permission.*

**GER 412 Practicum: Secondary Field Experience 1(Spec)**  
*Pre-student teaching experience in middle or high school teaching situation. CR/NC only. Co-requisite: GER 411.*

**GER 421 Foreign Language in Elementary Schools 1(1-0)**  
*Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting materials for the elementary school classroom. Practical experience through mini-teaching situations. Co-requisites: GER 411.*

**GER 422 Practicum: Elementary Field Experience 1(Spec)**  
*Pre-student teaching experience in elementary school teaching situation. CR/NC only. Co-requisite: GER 421.*

**GER 470 Advanced Studies in German 1-12(Spec)**  
*To develop advanced proficiency in German. Special topics may include language, literature, and/or culture. May be repeated when the content is not a duplication of a previous special topics offering. Recommended: 6 hours at the 300 level.*

**GER 597 Independent Study 1-6(Spec)**  
*The in-depth study of a topic under the direction of a faculty member who together with a student designs the format of the study. Prerequisites: permission of instructor and department chairperson; at least 6 hours on the 400 level.*



## GRK - Greek

See the Department of History, World Languages, and Cultures for more information.

### GRK 101 Classical Greek 4(4-0)

Grammar of written Greek prose of the Attic period, reading Greek text aloud, translation and composition.

### GRK 102 Classical Greek 4(4-0)

Continuation of GRK 101. Prerequisite: GRK 101.

### GRK 201 Classical Greek 4(4-0)

Reading and translation of Greek prose, including Xenophon and the Greek Bible. Prerequisite: GRK 102.

### GRK 202 Classical Greek 4(4-0)

Continued guidance of the student in reading Greek prose and in the analysis of connected texts. Prerequisite: GRK 201.

## GRN - Gerontology

Contact the Herbert H. and Grace A. Dow College of Health Professions for more information.

### GRN 590 Independent Study 1-6(Spec)

Student-initiated study (reading, research, and/or project development) on a topic not normally covered in existing courses. Prerequisite: permission of instructor.

### GRN 597 Special Topics 1-4(Spec)

Selected topics/problems of interest that are not normally included in existing courses. May include conferences, workshops, and seminars sponsored by the Interdisciplinary Gerontology Program. Prerequisite: permission of instructor.

## HDF - Human Development & Family Studies

See the Department of Human Development and Family Studies for more information.

### HDF 100 Lifespan Development 3(3-0)

Study of the basic principles of human development and their relation to family interactions throughout the lifespan. This course may be offered in an online format. May be offered as Writing Intensive. Recommended: Students who have taken EDU 280 or PSY 220 should seek departmental advice prior to enrollment. (University Program Group III-A: Behavioral Sciences)

### HDF 110 Oppression: Roots and Impact on Human Development in the United States 3(3-0)

A study of the roots and impact of different forms of oppression on the development of individuals within the family context. This course may be offered in an online or hybrid format. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

### HDF 200 Constructivism as a Tool for Learning 2(2-0)

Using Constructivist philosophy, students will establish their view of the young child, guiding adult, and environment as a lens to frame future teaching practices. This course may be offered in an online format.

### HDF 205 Teaching and Learning about Race in Early Childhood 3(3-0)

This course explores development of racial awareness; impacts of racism on development; and culturally responsive, anti-bias principles for children birth to 8 years of age. This course may be offered in an online format. May be offered as Writing Intensive. Recommended: HDF 100. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

### HDF 207 Introduction to Research Methods in HDFs 3(3-0)

Introduction to research processes within human development and family studies. This course may be offered in an online format. Prerequisite: HDF 100.

### HDF 211 Marriage and Close Relationships 3(3-0)

This course examines marital, familial, and other close relationships through a systemic framework. Issues of parenting, communication, abuse, resilience, sexuality, and diverse family composition are explored. This course may be offered in an online format.

### HDF 212 Families in Cultural Perspective 3(3-0)

The varieties of family forms and resulting patterns of interpersonal relations to be found throughout Western history and in selected Western and non-Western cultures. (University Program Group III-B: Studies in Social Structures)

### HDF 213 Introduction to Human Sexuality 3(3-0)

Human sexual development throughout the life cycle. Emphasis on understanding and acceptance of self as a sexually functioning person. Identical to WGS 213. Credit may not be earned in more than one of these courses. This course may be offered in an online format. (University Program IV-A: Studies in Discrimination)

### HDF 214QR Consumer Economics 3(3-0)

This course introduces financial and resource management skills using quantitative reasoning and mathematical calculations to enhance family financial well-being. This course may be offered in an online or hybrid format. Quantitative Reasoning.

### HDF 219 Applied HDFs: Introduction to the Field 3(Spec)

Students will explore pathways for meaningful work with children, individuals, and families through field placements, interactive discussions, and dynamic classroom experiences. Prerequisites: A signed major or minor in Child Development or Family Studies; HDF 100 or PSY 220 or HDF 211.

### HDF 247 Introduction to Gerontology 3(3-0)

An interdisciplinary approach to the study of aging with a focus on the normal changes that occur as one ages physically, mentally and socially. May be offered as writing intensive. This course may be offered in an online format. (University Program Group III-A: Behavioral Sciences)

### HDF 248 Service Learning in Gerontology 3(Spec)

A structured and supervised service learning experience in professional service settings specifically addressing the needs of older adults. Prerequisites: concurrent registration in or completion of HDF 247 or PSY 325.

### HDF 301 Infant Toddler Practicum Experience 1-3(Spec)

A structured observation experience that provides students with the opportunity to apply knowledge of typical infant/toddler development to observed behaviors. Prerequisite: HDF 100 or PSY 220; HDF 302.

### HDF 302 Infant and Toddler Development 3(Spec)

The study of pregnancy, prenatal development, childbirth, and the development of infants and toddlers (to 3 years) within the family and the larger social system. Prerequisites: HDF 100 or PSY 220.

### HDF 303 Early Childhood Development 4(Spec)

Principles for growth and development of preschool and early elementary children (ages 3-8) from diverse backgrounds and observations of children in early education settings. This course may be offered in an online format. Prerequisite: HDF 100 or PSY 220.

### HDF 306 Adolescent Development 3(3-0)

Study of adolescence and issues relating to the family of a teenager. Prerequisite: HDF 100 or EDU 280 or PSY 220.

### HDF 307 Parent-Child Relations 3(3-0)

The study of the parent-child relationship, and the impact of that relationship on the development of both children and parents. Prerequisite: one of: HDF 100, EDU 280, or PSY 220.

### HDF 308 Theories of Child and Adolescent Development 3(3-0)

Survey of child and adolescent theories of development. May be offered as Writing Intensive. Prerequisites: HDF 100 or EDU 280 or PSY 220; Signed major or minor in Child Development, or in Family Studies.

### HDF 309 Family and Community Partnerships in Early Childhood 3(3-0)

Study of the child, family, and community, including family engagement in learning, family and community characteristics, opportunities, and risk factors. This course may be offered in an online format. May be offered as Writing Intensive. Prerequisite: HDF 100 or PSY 220; Pre/Co-requisite: HDF 200.

### HDF 319 Applied HDFs: Developing Programs for Children and Families 3(3-0)

In this project-based learning course, students design, develop, and plan a program and grant to address issues faced by individuals, children, or families. Prerequisites: HDF 219 with a grade of C+ or better; a signed major in Family Studies or Child Development; HDF 207.

### HDF 320 HDFs International Service Learning 3-6(Spec)

An international cultural immersion experience working on a service learning project under the supervision of a faculty member. Prerequisite: Permission of instructor; minimum of 2.5 GPA; minimum of 24 CMU credit hours; depending on the service project approved, prerequisites may include language credit or ability, completion of specialized courses, or demonstration of appropriate skills for the project. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition, Option 2)

### HDF 321 International Reggio-Inspired Early Childhood Learning 3(Spec)

An international cultural immersion experience studying early childhood education as it is inspired by the early childhood centers of Reggio Emilia, Italy. Prerequisites: HDF 200 or 25 semester hours completed.

### HDF 328 Programs, Policies and Services for Older Adults 3(3-0)

An examination of U.S. legislation and policies that undergird the aging services network. Prerequisite: HDF 247.

### HDF 340 Men and Masculinities in Adulthood 3(3-0)

The course takes a social construction approach examining how a gendered society influences the way adult men perceive themselves, other men, women and social situations. Prerequisites: HDF 100 or HDF 247; one additional 3 credit HDF course.

### HDF 360 Integration of Content in Early Childhood through Play 4(Spec)

Integration of content knowledge in literacy, mathematics, science, and social studies through the developmental processes in which young children learn with an emphasis on play. Prerequisites: HDF 200 or SPE 126; HDF 303 or EDU 293.

### HDF 397 Special Topics in Human Development and Family Studies 1-6(Spec)

Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student's transcript. This course may be offered in an online format. Prerequisites: See Course Search and Registration.



**HDF 400 Developmental Assessment of Children 3(3-0)**

Focus on the purpose of assessment, with emphasis on methods and skills used in assessing young children's development. Collaboration with parents and professionals is emphasized. This course may be offered in an online format. Prerequisites: HDF 302 or 303 or ECDL Block.

**HDF 401QR Quantitative Methods in Childhood Assessment 3(3-0)**

Focus on quantitative methods and skills used in assessing young children's development. Analytical processes and collaboration with families and professionals is emphasized. This course may be taught in an online format. Quantitative Reasoning. Prerequisites: HDF 302 or HDF 303 or HDF 306 or HDF 510; or ECDL Block.

**HDF 402 Guidance for Young Children 3(Spec)**

Methods and theories of guidance for working with children in early childhood settings. Supervised laboratory experiences. This course may be offered in an online format. Prerequisites: HDF 200; HDF 303 with a grade of C+ or better; or ECDL Block. Recommended: HDF 403.

**HDF 403 Best Practices in Early Childhood Settings 3(3-0)**

Knowledge and application of evidence-based practices in early childhood settings. Opportunities to plan experiences in science, social studies, language, nutrition, movement and arts. This course may be offered in an online format. Prerequisites: HDF 200; HDF 303 with a grade of C+ or better; or ECDL Block. Recommended: HDF 402.

**HDF 404 Children and Hospitalization 3(3-0)**

This course focuses on children and hospitalization from developmental and contextual perspectives. Coping challenges and strategies to assist coping with hospitalization are examined. This course may be offered in online or hybrid format. Prerequisite: HDF 100 or PSY 220 or EDU 280.

**HDF 409 Lead Teaching Methods in Early Childhood (Science and Social Studies) 6(Spec)**

Development of professional skills for working with young children and families. Supervised lead teaching experience in the Child Development and Learning Laboratory. Prerequisites: Grade of C+ or better in HDF 402 and 403. Pre/Co-requisite: HDF 400 or HDF 401QR.

**HDF 411 Families in Social, Legal, and Political Contexts 3(3-0)**

This course examines how factors from social, legal, and political contexts influence family development and functioning over the life course. Prerequisites: HDF 211; senior standing.

**HDF 413 Facilitating Discussion in Human Sexuality Groups 3(3-0)**

The purpose, rationale, professional issues, planning, techniques and methods, learning objectives, evaluation, and guided experience in facilitating discussion in human sexuality groups. Prerequisites: permission of instructor; HDF 213 or SOC 213 or WGS 213.

**HDF 414 Human Development and Family Studies Applied Quantitative Research Methods 3(3-0)**

This course examines research processes within human development and family studies. This course may be offered in an online format. Prerequisites: HDF 100, 207.

**HDF 418 Family Development in Late Life 3(3-0)**

This course examines individual development and aging within the context of the family: marriage, singlehood and widowhood; intergenerational relations and grandparenthood; sibling relations and friendships. This course may be offered in an online format. Prerequisites: One of the following: HDF 100, HDF 247, PSY 100, SOC 100.

**HDF 419 Applied HDFs: Internship 1-12(Spec)**

Students work in a professional setting serving the needs of individuals, families, or children. No more than six credits may be taken each semester. Prerequisites: HDF 319 with a grade of C+ or better; a signed major in Child Development or Family Studies; permission of Internship Coordinator.

**HDF 430 Women and Aging 3(3-0)**

This course assumes multiple theoretical perspectives to examine older women's, psychological, social, and physical development, family and social roles, and policy implications. Identical to WGS 430. Credit may not be earned in more than one of these courses. This course may be offered online. Prerequisites: HDF 100 or 247 or PSY 325.

**HDF 490 Independent Study in Human Development and Family Studies 1-6(Spec)**

A student-initiated learning activity focusing on a faculty approved topic in Human Development and Family Studies. Prerequisite: Permission of Instructor.

**HDF 497 Special Topics in Human Development and Family Studies 1-15(Spec)**

Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student's transcript. Prerequisites: See Course Search and Registration.

**HDF 500 Supporting Children and Families through the Touchpoints Approach 3(3-0)**

Students explore evidence-based approaches to build optimal relationships with families and children based on Brazelton Touchpoints Center guiding principles. Prerequisites: 56 credit hours completed or graduate status. Recommended: One year experience working with children and families.

**HDF 505 Early Childhood Mental Health 3(3-0)**

Examines the social emotional development of young children, prenatal to 5-years-old, and factors that influence their development. Emphasis is on high-risk populations. This course may be offered in an online format. Prerequisites: HDF 302; HDF 303; or graduate standing.

**HDF 506 Practicum in Parent Involvement 3(2-2)**

Analysis of goals, trends, methods and models of parent involvement with opportunities to plan programs for parents, and to work with parents in professional settings. Prerequisites: HDF 307; one of HDF 302, HDF 303, HDF 306; or Human Development and Family Studies graduate standing.

**HDF 508 Early Childhood Program Administration and Leadership 3(3-0)**

The role of the early childhood program director as leader and architect of the work environment and climate. This course may be offered in an online format. Prerequisites: HDF 302 or 303; or ECDL Block; or graduate status.

**HDF 510 Child Development Seminar: Promoting Resilience 3(3-0)**

Through integration of theory, research, and practice, this course focuses on encouraging positive developmental outcomes and resilience in children and adolescents facing stressful life circumstances. May be offered as Writing Intensive. Prerequisites: Two of: HDF 302, HDF 303, HDF 306, HDF 307, HDF 308; or graduate standing.

**HDF 511 Seminar in Human Sexuality 3(3-0)**

Survey of professional literature pertaining to human sexuality. This course may be offered in an online format. Prerequisite: HDF/WGS 213 or HSC 222; or graduate standing.

**HDF 513 Readings in the Family 3(3-0)**

Survey of professional literature related to the family. This course may be offered in an online format. Prerequisite: HDF 211 or SOC 411; or graduate standing.

**HDF 516 Family Development: Early Adulthood/Middle Age 3(3-0)**

A study of the tasks and transitions of the periods of the family life cycle from early adulthood through middle age. This course may be offered in an online format. Prerequisites: HDF 100 or PSY 220; HDF 211 or SOC 411; or graduate standing.

**HDF 517 Readings in Marital Counseling and Divorce 3(3-0)**

Analysis of changing philosophical conceptualizations of marriage and family, as reflected by emerging issues in marriage counseling and divorce. Prerequisites: HDF 211.

**HDF 535 Dementia Care: Diagnosis, Treatment and Prevention 3(3-0)**

This course provides a foundation in normal aging and then addresses the individual, family and institutional challenges of diagnosis, treatment and prevention of dementing illnesses. Prerequisites: HDF 247 or PSY 325 or HSC 390.

**HDF 597 Special Topics in Human Development and Family Studies 1-15(Spec)**

Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student's transcript. This course may be offered in an online format. Prerequisites: See Course Search and Registration.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**HDF 600 Professional Seminar I-Introduction to HDFs 1(1-0)****HDF 601 Human Growth and Development: 0-8 Years 3(3-0)****HDF 602 Professional Seminar II - Diversity in HDFs 1(1-0)****HDF 603 Human Diversity Within and Between Families 3(3-0)****HDF 604 Professional Seminar III - Grant Writing in HDFs 1(1-0)****HDF 606 Human Growth and Development: Issues in Adolescent Development 3(3-0)****HDF 609 Application of Theory and Research in Human Development 3(3-0)****HDF 615 Application of Theory and Research in Family Studies 3(3-0)****HDF 618 The Family Life Cycle: The Older Adult 3(3-0)****HDF 619 Continuing Registration for Final Research Project 1(1-0)****HDF 630 Applied Research Methods 3(3-0)****HDF 631 Gerontology: Theory and Practice 3(3-0)****HDF 632 Public Policy and Aging 3(3-0)****HDF 634 Statistical Applications in Human Services 3(3-0)****HDF 635 Skill Mentorship in HDFs: Teaching 1(Spec)****HDF 636 Skill Mentorship in HDFs: Research 1(Spec)****HDF 637 Skill Mentorship in HDFs: Practice 1(Spec)****HDF 640 Practice in Human Services 3(3-0)****HDF 642 Program Development and Evaluation in Human Services 3(3-0)****HDF 686 Practicum I in HDFs 3(Spec)****HDF 688 Practicum II in HDFs 3(Spec)****HDF 697 Special Topics in Human Development and Family Studies 1-15(Spec)****HDF 786 Occupational Field Experience 3(Spec)****HDF 797 Special Topics in Human Development and Family Studies 1-15(Spec)****HDF 798 Thesis in Human Development and Family Studies 1-6(Spec)****HDF 799 Plan B Project in Human Development and Family Studies 3(3-0)**

## HED - Higher Education

See the Department of Counseling, Educational Leadership, and Higher Education for more information.

### HED 216 Race in Higher Education 3(3-0)

Exploration of race in higher education. Emphasis on the social and cultural construction of race in higher education contexts. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

### HED 274 Gender in Higher Education 3(3-0)

Exploration of gender in higher education. Emphasis on the social and cultural construction of gender in higher education contexts. (University Program Group IV-A: Studies in Discrimination)

### HED 301QR Social Class in Higher Education 3(3-0)

This course uses quantitative reasoning skills to understand how social class influences higher education. Quantitative Reasoning. (University Program Group III-B: Studies in Social Structures)

### HED 325 Foundations of Higher Education 3(3-0)

Students will examine the philosophy of history of higher education and student affairs. This course may be offered in an online format. Prerequisites: 24 completed credit hours.

### HED 360 Leading Diverse Teams 3(3-0)

Exploration of the uniqueness of socially-constructed identities by learning the process of leading diverse teams within an educational setting. This course may be offered in an online or hybrid format. Prerequisite: LDR 200.

### HED 452 Immersive Leadership in Educational Settings 3(3-0)

Examination of inclusion-based leadership tenets and efforts at an off-site educational institution. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and 56 earned semester hours.

### HED 476 Outcome-Based Learning 3(3-0)

Development and assessment of learning outcomes within higher education settings. This course may be offered in an online or hybrid format. Prerequisite: LDR 200.

### HED 512 Assessment in Higher Education 3(3-0)

This course will examine assessment in higher education settings. Students will conduct assessments used in evaluation and accreditation protocols. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and 80 earned semester credits or graduate standing.

### HED 516 Foundations for Social Justice 3(3-0)

Examination of social justice perspectives and their application to complex relationships found in and around institutions of learning. Prerequisites: 56 credit hours or graduate standing.

### HED 557 Helping Skills in Student Affairs 3(3-0)

Examination of the role of student affairs educators as helpers through theoretical explorations and practical simulations. Prerequisites: 56 credits or graduate standing.

### HED 598 College Student Development 3(3-0)

Examination and application of relevant developmental theories and models for facilitating holistic student development. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and HED 557 or graduate standing.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

### HED 611 Critical Approaches to Assessment in Higher Education 3(3-0)

### HED 612 Methods and Techniques of Training and Development 3(3-0)

### HED 626 The Adult Learner 3(3-0)

### HED 636 Higher Education Law 3(3-0)

### HED 659 Organization of Community Colleges 3(3-0)

### HED 676 Administration of Community Colleges 3(3-0)

### HED 677 Contemporary College Students 3(3-0)

### HED 680 Critical Perspectives in College and Adult Learning Settings 3(3-0)

### HED 681 Teaching with Technology in College and Adult Learning Settings 3(3-0)

### HED 682 Course Design and Assessment in College and Adult Learning Settings 3(3-0)

### HED 685 Special Topics in Equity Centered Teaching and Learning 1-3(Spec)

### HED 696 Higher Education Practicum 1-9(Spec)

### HED 697 College & Adult Teaching Practicum 1-6(Spec)

### HED 698 Master's Colloquium 3(3-0)

### HED 705 Comparative Community College Systems 3(3-0)

### HED 716 Readings in Equity and Inclusion in Higher Education 3(3-0)

### HED 757 Student Development Theory 3(3-0)

### HED 763 The Academic Profession 3(3-0)

### HED 764 Financing of Higher Education 3(3-0)

### HED 776 Administration of Higher Education 3(3-0)

### HED 777 Student Affairs Administration 3(3-0)

### HED 778 Contemporary Issues in Higher Education 3(3-0)

### HED 864 Economics and Finance of Higher Education 3(3-0)

### HED 876 Higher Education Policy 3(3-0)

## HNS - Environmental Health and Safety

See the Department of Health Sciences for more information.

### HNS 300 Special Topics in Environmental Health and Safety 1-3(Spec)

Selected topics/current issues of interest in Environmental Health and Safety not included in existing courses. Current course topic is listed in the semester Class Schedule. Repeatable up to 3 credits when content does not duplicate previous topics studied. This course may be offered in an online format. Prerequisite: At least one 100-level course on the Environmental Health and Safety major. See semester Class Schedule for specific course required for the Special Topic.

### HNS 345 Occupational Health and Safety 3(3-0)

Principles of occupational health and safety with emphasis on health and safety standards, program development, training, and auditing to minimize/eliminate workplace injuries and illness. Prerequisites: one course in Biology or Chemistry; 55 credit hours completed. Recommended: ATR 480 or HSC 352 or HSC 425.

### HNS 390 Independent Study 1-3(Spec)

Student-initiated study guided by a faculty member associated with the Environmental Health and Safety major. This course may be offered in an online format. Prerequisites: One course at the 200-level or above on the Environmental Health & Safety major; permission of instructor.

### HNS 425 Hazardous Materials Technology 3(3-0)

Characterization of hazardous materials at waste or emergency sites and related health, safety, and regulatory issues for persons conducting, supervising, and managing field activities. Prerequisites: CHM 120 or 131; ENS 307 or HSC 352 or IET 327; 55 credit hours completed.

### HNS 452 Environmental Health & Safety Internship 3(Spec)

Application of knowledge and skills in environmental health and safety at an approved, supervised internship site. CR/NC only. Prerequisites: HSC 352 or IET 327; signed Environmental Health and Safety major; 85 credit hours completed; permission of instructor.

## HOA - Hotel Administration

See the Department of Marketing, Hospitality, and Logistics for more information.

### HOA 334 Casino Operation and Management 3(3-0)

Practices and problems associated with casino management, including staffing, security and control, taxation and entertainment. Prerequisites: 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

### HOA 339 Protection of Casino Table Games 3(3-0)

An in-depth examination of the various methods used to protect casino table games. The course reviews blackjack, baccarat, poker, craps and roulette, examining possible ways that cheating can occur. Methods of detection and various internal controls used by the casino will be discussed. Prerequisites: 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

### HOA 426 Accounting for the Hotel Casino 3(3-0)

Examines the accounting systems, procedures and controls required by both management and government for internal auditing, financial reporting and government control. Prerequisites: 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

### HOA 436 Mathematics of Casino Games 3(3-0)

Develops the techniques and methods for computing the probabilities, expected values and house percentages of casino games and analyzes the effects of changes in playing rules and payoff odds. Prerequisites: 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

### HOA 437 Gaming Regulations and Control 3(3-0)

Nevada's system of gaming regulation and control will provide a model for studying the history, purpose, politics, methods, and limitations—both practical and legal—of governmental regulation and control of legal gambling. Prerequisites: 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

### HOA 439 Seminars in Casino Management 3(3-0)

Special topics in casino problems. Course open to experienced casino personnel. Prerequisites: 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

### HOA 442 Sociology of Gambling 3(3-0)

Analysis of patterns of participation in various forms of gambling, the political/economic background of gambling, and the effects of gambling on communities, lifestyles and value systems. Prerequisites: 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

## HON - Honors

See the Honors Program for more information (see index for page number).

### HON 100 Introduction to Honors 3(Spec)

Introduction to the mission, core values, and goals of the University Honors Program for first year Honors students. Credit cannot be earned in both HON 100 and HON 300. Prerequisite: Admission to the University Honors Program. Co-requisite: Enrollment in one Honors First Year Seminar: HON 201, 202, 203, 204, 205, 206, 207, 208.

### HON 102 Honors Colloquium 1-3(Spec)

Colloquia are experimental or novel courses which are open to all Honors students. Colloquia intend to introduce new subjects or questions or to probe deeply into more narrowly defined areas. Repeatable up to 3 credits when content previously studied is not duplicated. Prerequisite: Honor students only.

### HON 149 Introductory Honors College of Medicine Seminar 1(1-0)

Introduction to the medical world to provide support for College of Medicine Honors Early Assurance Program students. Prerequisites: Successful completion of CMU College of Medicine Honors Early Assurance Application and selection to the program.

### HON 201WI Honors Studies in Human Events and Ideas: First Year Seminar 3(3-0)

Explores a complex issue through the lens of the Humanities and seeks solutions to the great challenges facing our world. Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group I-A: Human Events and Ideas)

### HON 202WI Honors Studies in the Arts: First Year Seminar 3(3-0)

Explores a complex issue through the lens of the Humanities and seeks solutions to the great challenges facing our world. Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group I-B: The Arts)

### HON 203WI Honors Descriptive Science: First Year Seminar 3(3-0)

Explores a complex issue through the lens of the descriptive sciences and seeks solutions to the great challenges facing our world. Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group II-A: Descriptive Sciences)

### HON 204WI Honors Quantitative and Mathematical Science: First Year Seminar 3(3-0)

Explores a complex issue using approaches from the quantitative and mathematical sciences and seeks solutions to the great challenges facing our world. Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group II-B: Quantitative and Mathematical Science)

### HON 205WI Honors Behavioral Sciences: First Year Seminar 3(3-0)

Explores a complex issue through the lens of the behavioral sciences and seeks solutions to the great challenges facing our world. Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group III-A: Behavioral Sciences)

### HON 206WI Honors Studies in Social Structures: First Year Seminar 3(3-0)

Explores a complex issue through an analysis of social structures and seeks solutions to the great challenges facing our world. Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group III-B: Studies in Social Structures)

### HON 207WI Honors Studies in Global Cultures: First Year Seminar 3(3-0)

Explores the complexity of global cultures and seeks solutions to the great challenges facing our world. Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

### HON 208WI Honors Studies in Racism and Diversity in the U.S.: First Year Seminar 3(3-0)

Explores the complexity of racism as a great challenge facing our world and seeks solutions that promote diversity. Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

### HON 209WI Honors Studies in Discrimination in the U. S. 3(3-0)

Explores the complexity of discrimination as a great challenge facing our nation and the world and seeks solutions that promote diversity. Writing Intensive. Prerequisite: Admission to the Honors Program. Co-requisite: HON 100. (University Program IV-A: Studies in Discrimination)

### HON 249 Intermediate Honors College of Medicine Seminar 1(1-0)

Expand upon medical knowledge and experience developed in HON 149 to provide support for the medical school application process. Prerequisite: Successful completion of HON 149.

### HON 300 Introduction to Honors II 3(Spec)

Introduction to the mission, core values, and goals of the University Honors Program for first semester, Track II, Honors students. Credit cannot be earned in both HON 100 and HON 300. Prerequisite: Track II Admission to the University Honors Program.

### HON 309 Honors Global Citizenship 1-6(Spec)

This course is designed to engage Honors students in global citizenship through study abroad experience. This course may be repeated when offered with a different focus of study. Prerequisites: Completion of HON 100 or 300, good standing in Honors. (University Program Group IV-B: Studies in Cultures Outside of the AngloAmerican Tradition)

### HON 310 Honors Academic Service Learning 1-4(Spec)

This course offers an opportunity for honors students to perform targeted academic-based service work under the supervision of a CMU faculty member. This course may be repeated when offered with a different focus of study. This course may be offered in an online or hybrid format. Prerequisites: HON 100 or 300; good standing in Honors.

### HON 315 Honors College Teaching Assistant 1-9(Spec)

Exposure to student development theory and practical skills for effective teaching/mentoring of Honors students. The course may be taken up to three times. Prerequisite: Successful completion of HON 100 or HON 300.

### HON 317 Honors Practicum in Periodical Editing and Publication 1-4(Spec)

Practicum on periodical editing and publication for students editing the The Honors Platform and The Great Lakes Platform. Repeatable up to four hours. This course may be offered in an online/hybrid format. Prerequisites: ENG 101 with a grade of B- or better. Recommended: ENG 201 with a grade of "B-" or better.

### HON 319 Culture and Inequality in the U.S. 3(Spec)

This course is designed for Honors students to examine issues relevant to various cultural groups in the U.S., including the broader issues of racism and discrimination. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

### HON 320 Discrimination and Diversity in the U.S. 3(Spec)

Honors students examine issues relevant to various cultural groups in the United States, with a focus on diversity and causes of and responses to discrimination. Prerequisite: HON 100 or HON 300. (University Program IV-A: Studies in Discrimination)

### HON 321 Seminar 1-12(Spec)

Honors seminars are more cognitively advanced courses addressing various topics, themes, and problems, and assuming experience and skill in analysis, synthesis, critical evaluation, and research. They are open primarily to sophomores, juniors, and transfer students.

### HON 349 Advanced Honors College of Medicine Seminar 1(1-0)

Final course on undergraduate medical knowledge and experience, building on foundations from HON 149 and 249, in preparation for the medical school application process. Prerequisites: Successful completion of HON 149 and HON 249.

### HON 399 Independent Study 1-6(Spec)

Provides an opportunity for the student to investigate an approved topic which relates to her/his special needs and interests.

### HON 401 Confrontation Colloquium 3(3-0)

These team-taught courses provide an opportunity for advanced multidisciplinary scholarship in which an integrating activity, project, or exhibit will be required.

### HON 499 Senior Project 3-6(Spec)

An opportunity for senior honors students individually to design and execute multidisciplinary scholarship. May be offered as Writing Intensive.

## HPE - Health and Physical Education

See the Department of Physical Education and Sport for more information.

### HPE 215WI Health and Physical Education Curriculum and Programming 4(4-0)

This course prepares students to design Health and Physical education programs that are consistent with state and national standards and tailored to constituency needs. Writing Intensive. Students are required to receive a C+ or better in this course.

### HPE 222 Sexuality in Health Education 3(3-0)

Theory and practice in sexuality education within schools and communities. Emphasis is on legal implications, program requirements and implementation to meet national and state guidelines.

### HPE 223 Basic Health Concepts I 3(3-0)

One of two introductory content courses in health education covering: nutrition, physical activity, alcohol, tobacco, drugs, growth and development, and disease prevention.

### HPE 224 Basic Health Concepts II 3(3-0)

One of two introductory health content courses covering: environmental health, unintentional injury, suicide, mental and emotional health, violence prevention, and character education.

### HPE 310 Physical Education for the Classroom Teacher 2(Spec)

Orientation of physical education content for classroom teachers, focusing on benefits of physical activity and strategies that contribute to growth, development and accelerated classroom learning. Prerequisite: EDU 107.

### HPE 316 Assessment in Health and Physical Education 3(3-0)

Selection, criteria, methods, and procedures used in assessing the cognitive, psychomotor, affective, and health-related physical fitness domains in K-12 health and physical education. Prerequisites: HPE 215.

### HPE 323 Applied Skills & Methods - Individual and Team Sports 3(3-0)

The development of skills and strategies used in competitive environments in individual and team sports. Emphasis on form, teaching progressions, and effective drills. Pre/Co-requisites: HPE 215, PES 115.



**HPE 325 Applied Skills & Methods in Fitness Education 3(2-1)**

Planning, implementation and assessment of fitness education techniques and modalities for grades 5-12. Prerequisite: HPE 215WI; Recommended: PES 186QR.

**HPE 340 Curriculum and Planning School Health Programs 3(3-0)**

This course will enable health and physical education students to develop planning skills for health and wellness programs in the school setting. Pre/Co-requisites: HPE 222 or HPE 223 or HPE 224.

**HPE 344 Methods in Elementary Health and Physical Education 3(3-0)**

Program development and effective teaching practices for PK-5 grade level students in Health and Physical Education. Prerequisites: HPE 215, HPE 340.

**HPE 346 Methods in Secondary Health Education 3(3-0)**

Methods in teaching secondary school health education. Prerequisite: HPE 340.

**HPE 348 Methods in Secondary Physical Education 3(3-0)**

A broad spectrum of methods used in secondary physical education. Emphasis on teaching and development of reflective teaching practices including assessment of teaching performance. Prerequisite: HPE 325; Pre/Co-requisite: HPE 323.

**HPE 386 Adapted Physical Education 3(3-0)**

Physical needs of the atypical individual; ameliorative effects of physical activity, school programs appropriate for exceptional children. Prerequisite: HPE 215.

**HPE 425 Clinical Experience in Health and Physical Education 2(Spec)**

Clinical Experience in Health and Physical Education including a 60-hour on-site field experience. CR/NC only. Prerequisites: HPE 344, HPE 346, HPE 348.

**HPE 435 Professional Aspects in Health and Physical Education 3(3-0)**

Comprehensive experience in health and physical education addressing competencies, professionalism, and issues in health and physical education including planning, instruction, assessing, ethics, collaboration, and advocacy. Prerequisite: HPE 416; Pre/Co-requisite: HPE 425.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**HPE 605 Motor Behavior and Adapted Physical Education 3(3-0)****HPE 625 Principles and Methods in Fitness Education and Lifetime Physical Activity 3(3-0)****HPE 645 Curriculum Content in Health & Wellness Education 3(3-0)****HPE 665 Methods in Teaching Health and Physical Education 3(3-0)****HPE 685 Programming and Assessment in Health and Physical Education 3(Spec)**

## HPS - Health Professions

*See the Herbert H. and Grace A. Dow College of Health Professions for more information.*

**HPS 101WI Introduction to the Health Professions 3(3-0)**

Provides an understanding of the university environment, value of learning, and student responsibilities while emphasizing health professions and exploring self-identification skills necessary for choosing careers. Writing Intensive.

**HPS 200 Sophomore Seminar 1(1-0)**

Explores the student's readiness for the second year and facilitates successful transition for completion of the sophomore year. This course may be offered in an online format. Prerequisites: 24 credit hours completed.

**HPS 300 Junior-Senior Seminar 1(1-0)**

Exploration of best practices for the successful transition to the junior and senior year, and readiness for graduation and career success. This course may be offered in an online format. Prerequisites: 56 credit hours. Recommended: Signed major.

**HPS 310 Special Topics 1-3(Spec)**

Selected topic/current issue not normally included in existing courses. Topic is revealed in the semester course registration. Repeatable up to 3 credits when content does not duplicate previous topic/issue studied. This course may be offered in an online format. Prerequisites: 36 semester hours completed.

**HPS 350WI Readiness: College-to-Career Transition 3(3-0)**

The exploration of the student's readiness for the transition from the undergraduate college experience to professional work or graduate education. Writing Intensive. Prerequisites: Signed Major; 62 credit hours completed.

## HSA - Hospitality Services Administration

*See the Department of Marketing, Hospitality, and Logistics for more information.*

**HSA 120 Introduction to the Gaming Industry 3(3-0)**

Overview of gaming industry; including scope, staffing, security, control, taxation, government regulations, and social, economic, and cultural impacts of gaming on host community.

**HSA 210 Effective Supervision: Principles and Practices 3(3-0)**

Prepares students to be effective first-line supervisors in a variety of organizational settings by using sound principles and practices applied to basic managerial processes. Identical to MGT 210. Credit may not be earned in more than one of these courses.

**HSA 240 Introduction to Hospitality Services Administration 3(3-0)**

Lectures and travel giving a broad introduction to the services industry in the United States and the world. Additional fee required.

**HSA 245 Wines of the World 1(1-0)**

This is an introduction to the subject of wine, its history, variety, production, commercial and social role. Course participants gain experience in identifying wines, appraising value, serving, and discussing wines intelligently and constructively in today's era of social responsibility.

**HSA 297 Special Topics 1-6(Spec)**

Selected problems of interest to students which are not normally included in existing courses. Specific topics will be listed on students' transcripts.

**HSA 331 Hospitality Industry Information Systems 3(3-0)**

Concepts and design of information systems and the role of the computer in hotels, restaurants and travel-related industries. Prerequisites: ACC 202; BIS 221; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 340 Hospitality Sales 3(3-0)**

Specialized instruction on how hospitality professionals book business at their properties and deliver outcomes that meet the needs of customers. Prerequisite: HSA 240.

**HSA 341 Services Marketing 3(3-0)**

Planning and implementation of marketing strategy and application of the marketing mix to services including hospitality, banking and health services. Identical to MKT 341. Credit may not be earned in more than one of these courses. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 343 Tourism 3(3-0)**

An examination of where and why the hospitality services industry client travels domestically and abroad, and the economic impact of tourism expenditures. Identical to RPL 343. Credit may not be earned in more than one of these courses.

**HSA 344 Legal Aspects of Hospitality Services 3(3-0)**

An analysis of the legal and labor environments of the hospitality services industry. Prerequisites: BLR 202; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 348 Franchising 3(3-0)**

This course explores the major functional areas of franchising, franchising agreements, characteristics of the franchisor and franchisee, franchising opportunities, legal concerns, and franchising strategies. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

**HSA 350 Lodging Operations 3(3-0)**

A detailed look at the multi-dimensional lodging operations from a manager's perspective. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 390 Field Studies in Hospitality Services Administration 3(3-0)**

Activities which may include industrial visitations and work study in conference with supervision of cooperating organization, professor and student. Prerequisites: permission of instructor; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 397 Special Topics 1-6(Spec)**

Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcript. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 445 Advanced Food and Beverage Systems Management 3(3-0)**

Studies in advanced management requirements in food and beverage systems. Prerequisites: Completion of NDS 365/366 encouraged; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 447 Financial Management in the Hospitality Service Sector 3(3-0)**

Acquaints the student with current and anticipated financial environment for lodging and food services organizations and develops skills in managing financial resources in the industry. Prerequisites: MGT 258 or MGT 312; ACC 201 or ACC 250, ACC 202 or ACC 255; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 490 Hospitality Internship 3(Spec)**

Full-time summer designed work experience in hospitality operations agreed to by student and faculty coordinator. Detailed written report required. Prerequisites: 56 semester hours completed; HSA major or concentration; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.



**HSA 491 Independent Studies 1-6(Spec)**

Directed reading or research on an approved topic. Open to seniors in good academic standing. Prerequisites: prior permission of instructor and department chairperson; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 542 International Tourism 3(3-0)**

This course focuses on the strategic management of international tourism in hospitality organizations, associations, and government agencies. Prerequisites: 86 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 546 Management in the Hospitality Service Sector 3(3-0)**

Management and personnel functions as they relate to the hospitality industry; skills necessary to manage hotels, clubs, resorts; role of food service in these operations. This course may be offered in an online format. Prerequisites: HSA 350, 447; 86 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**HSA 597 Special Topics 1-6(Spec)**

Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcript. Prerequisites: Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor, and senior standing; 86 hours completed.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**HSA 791 Independent Studies 1-6(Spec)****HSA 797 Special Topics 3-6(Spec)****HSA 798 Thesis 1-6(Spec)**

## HSC - Health Sciences

*See the School of Health Sciences for more information.*

**HSC 106QR Healthy Lifestyles 3(2-1)**

Focus on individual health and wellness concepts using quantitative reasoning. Designed to assist the individual in striving for lifelong learning about healthier lifestyles. Quantitative Reasoning.

**HSC 107 Drugs and the Athlete 1(1-0)**

An orientation in basic chemical substances and nutrition as an ergogenic aid as they affect athletic performance. This course may be offered in an online hybrid format.

**HSC 110 Introduction to Public Health 3(3-0)**

Introduction to the field of public health, exploring the relationship between individual, public choices, and systems and how that impacts health.

**HSC 190 Introduction to Exercise Science 1(1-0)**

Introduction to the field of exercise science, including elements from the basic and clinical sciences and other allied health professions that integrate with exercise science.

**HSC 201 Medical Terminology 3(3-0)**

A self-study module course for learning anatomical directions, planes, comprehensive clinical vocabulary, words made from word parts, and imaging terms used in health care. Recommended: Successful completion of at least two semesters of coursework at the college level.

**HSC 203WI Leadership for the Health Professions 3(3-0)**

Engages the student in exploring, understanding and applying leadership concepts, skills, and behaviors in personal and professional development for leading in the healthcare field. Writing Intensive.

**HSC 205 Responding to Emergencies 2(1-2)**

Includes CPR and first aid care. American Red Cross certification for first aid and CPR can be earned.

**HSC 211 Human Anatomy and Physiology 3(3-0)**

Covers basic structure and function of the human body. Prepares non-science majors and health profession students to take advanced human anatomy and physiology courses. Recommended: Successful completion of a college level science course or a strong background in basic sciences, i.e. high school biology or chemistry.

**HSC 212 Applied Anatomy and Kinesiology 3(3-1)**

Functional aspects of human anatomy and application to physical activity, exercise, and human performance. Prerequisites: HSC 211 or HSC 214.

**HSC 213 Anatomy & Physiology Laboratory 1(0-2)**

A learning experience using laboratory techniques and procedures to develop an understanding of the human body structure and function. Prerequisite: HSC 211 or concurrent enrollment.

**HSC 214 Human Anatomy 4(3-3)**

A comprehensive course in the structure of the human body organized by systems. Laboratory work includes identification of fundamental anatomical structures on models and cadavers. Prerequisites: HSC 211 or 12 credit hours completed with one course in BIO or CHM or PHY.

**HSC 215 Human Physiology 4(3-2)**

A comprehensive course that studies the function of the organ systems of the human body. Laboratory work in fundamental physiological principles is included. Pre/Co-Requisite: HSC 214.

**HSC 216 Biomechanics and Kinesiology 3(2-2)**

The study of functional aspects of human movement, including basic biomechanics and structural kinesiology. Prerequisites: HSC 214, HSC 215.

**HSC 219 Exercise Conditioning for Health Fitness Professionals 2(1-2)**

Students will learn to assess and perform various exercises utilized in personal training and strength and conditioning, and achieve a standard of fitness competence themselves. Prerequisites: HSC 214, 215.

**HSC 220 Health-related Components of Fitness 3(2-2)**

Theory and practice related to exercise testing and administration for the health-related components of fitness. Practical experience in fitness evaluation, exercise technique and program design. Prerequisites: HSC 214, 215.

**HSC 221 Public Health Theory 3(3-0)**

This course introduces public health theory and research and how they are incorporated into intervention, design and evaluation of individuals, groups, and communities. This course may be offered in an online format. Prerequisite: HSC 110.

**HSC 235 Psychoactive Drugs 3(3-0)**

The study of psychoactive drugs: what they are; how they work; and why people use and/or abuse them; and their impact on society. Not open to students with credit in HSC 528, 529, or 530. This course may be offered in an online format. Recommended: Any natural or social science course.

**HSC 236 Substance Abuse Intervention Programming 3(3-0)**

Investigate substance abuse programs and explore substance abuse intervention. Prerequisite: HSC 235.

**HSC 297 Special Topics 1-12(Spec)**

Contains subject matter not included in courses currently listed in the Bulletin. Prerequisite: Permission of Instructor.

**HSC 308 Physiology of Sport and Exercise 3(3-0)**

Lectures on basic principles of physiology of exercise. The basics of exercise, performance conditioning, and the human organism response to these conditions. Prerequisites: HSC 211; or HSC 214, HSC 215.

**HSC 310 ECG Assessment 2(2-1)**

Emphasis is placed on the recognition and interpretation of normal and abnormal resting and exercise ECGs. Includes lab experience in resting and exercise ECG monitoring. Prerequisites: A grade of C or higher in HSC 214, 215; a signed Exercise Science Major: Clinical Exercise Science Option or a signed Health Fitness in Preventive and Rehabilitative Major.

**HSC 311 Cardiac Monitoring and Therapy 3(3-0)**

Course emphasizing cardiac electrophysiology and interpretation of ECGs, and the mechanisms of action of cardiac medications used to treat cardiovascular diseases. Prerequisite: 56 hours completed. Recommended: CHM 120 or CHM 131; HSC 214, HSC 215.

**HSC 313 Field Experience in School Health Education 1(Spec)**

A 30-hour field experience of on-site observation and participation under the supervision of the department and a secondary school health education teacher. CR/NC only. Prerequisites: EDU 107; HSC 205, HSC 211, HSC 222, HSC 235; HSC 503 or NDS 370.

**HSC 315WI Critical Analysis of Contemporary Issues in Exercise and Health Science 3(3-0)**

Topics in exercise and health sciences will be researched and analyzed to substantiate and critique widely held beliefs and theories in the field. Writing Intensive. Prerequisites: Previous WI course; HSC 190.

**HSC 317 Community Health 3(3-0)**

Introduction to public health, and services provided to citizens and educators by official and voluntary health agencies. This course may be offered in an online or hybrid format.

**HSC 319 Methods and Materials in Community Health Education 3(3-0)**

This course develops skills and techniques in writing, public speaking, and group dynamics as they relate to public health and community programs. Prerequisite: A signed Public Health major or minor.

**HSC 323 Community Organization Methods 3(3-0)**

The course examines the principles of community organization practice for health education. Community organization models, concepts, skills, strategies, and theories will be addressed.

**HSC 325 Public Health Policy and Advocacy 3(3-0)**

The course presents an overview of public health policy issues, interventions, and the influence of the political, bureaucratic and social environments. Prerequisite: HSC 110; Pre/Co-requisite: HSC 221.

**HSC 333 Managing the Health of Populations 3(3-0)**

This course provides the foundation of managerial epidemiology within the context of population health management and sound healthcare delivery administration. Recommended: STA 282.

**HSC 343 Health Education in the Elementary School 2(2-0)**

A study of health education programs and practices for teachers at the elementary school level. This course may be offered in an online format. Prerequisite: EDU 107.

**HSC 350 Community Service in the Health Educators 2(2-0)**

A service-learning experience where the student is engaged in a hands-on service project. Academic coverage includes the philosophy, objectives, and methods of community service. Prerequisite: HSC 317.

**HSC 352 Environmental Health 3(3-0)**

Emphasis on today's environmental problems related to health, air, water, radiation, housing, urbanization, disease, weapons, and humans' responsibilities and remedial actions to these problems. This course may be offered in an online format.

**HSC 390 Health and Aging 3(3-0)**

A study of age-related changes of the body, health concerns, healthy life-styles and health care for older adults.

**HSC 404 Epidemiology 3(3-0)**

This course covers basic principles and methods of epidemiology including determinants of disease distribution, measures of disease frequency and association, study designs, and data sources. Prerequisites: Math competency; 56 credits.

**HSC 411 Pathophysiology 3(3-0)**

Study of body's physiological responses to disease states. Emphasis is placed on the interactions among body systems and deviations from homeostasis. Prerequisite: HSC 211 or HSC 215 or BIO 392.

**HSC 413 Professional Aspects in School Health 3(2-1)**

Course addresses competencies, professionalism, and issues in school health education, including a 60-hour onsite field experience. Pre/Co-requisite: HSC 346.

**HSC 414 Decision Technologies in Health Care 3(3-0)**

This course surveys two computer-based tools, simulation and geographical information systems, commonly used to market and manage the delivery of health services. Prerequisite: an introductory probability or statistics course.

**HSC 418 Professional Aspects of Health Education 2(2-0)**

This course will address professional issues relating to the history, philosophy, ethics, practice, settings, and competencies of health education. Prerequisites: HSC 317 or concurrent enrollment.

**HSC 419WI Community Health Assessment, Planning and Program Evaluation 3(3-0)**

Models, theories, methodologies, interventions, and evaluation of community health assessments and programs will be discussed, along with other health education responsibilities and initiatives. Writing Intensive. Prerequisites: HSC 319, HSC 325.

**HSC 420 Fitness and Performance Assessment 3(2-3)**

Practical course on testing fitness and performance including tests of cardiovascular fitness, muscular strength and endurance, flexibility, and body composition. Prerequisite: Signed Exercise Science major. Pre/Co-requisite: HSC 308.

**HSC 421 Training for Fitness and Performance 3(2-3)**

Practical course to instruct students in leading safe and effective exercise programs in a variety of environments for athletes to sedentary individuals. Prerequisites: HSC 219, 420; signed Exercise Science major: Health Fitness option or Health Fitness minor.

**HSC 423 Practicum in Personal Training 2(1-3)**

This course is designed for students to obtain experience developing and conducting safe and effective exercise testing and training programs with clients one-on-one. CR/NC only. Prerequisite: HSC 421.

**HSC 424 Practicum in Health Fitness 2(0-6)**

Practical experience with health/fitness appraisal, exercise prescription, fitness leadership and other staff functions in various campus and community fitness facilities. CR/NC only. Prerequisites: HSC 205; 219 or 220; 308.

**HSC 425 Health Fitness Program Administration/Management 3(3-0)**

This course will prepare students to work in health fitness settings organizing, administering and supervising programs for apparently healthy individuals or those with controlled risks. Prerequisites: HSC 308.

**HSC 454 International Health Systems, Organizations and Policy 3(3-0)**

Overview of health systems structure, service delivery, administrative processes and policy dimensions from an international perspective. This course may be offered in an online format. Prerequisite: HSC 333 and 48 credit hours completed.

**HSC 490WI Kinesiology Capstone 3(3-0)**

Students will integrate and apply their knowledge from core courses in Exercise Science: Kinesiology to transition to professional work or graduate studies. Writing Intensive. Prerequisites: Signed major in Exercise Science: Kinesiology Option; HSC 190, HSC 205, HSC 212, HSC 214, HSC 215, HSC 308 with a C+ or better.

**HSC 500 Health Informatics 3(3-0)**

Health Informatics field, its major applications and data analysis methods to improve quality, accessibility and cost of healthcare. Prerequisites: STA 282 or PSY 211 or graduate standing.

**HSC 503 Health Implications of Obesity 3(3-0)**

Obesity will be studied with special emphasis on prevalence and etiology. Modes of prevention and treatment including diet and exercise will also be discussed. Prerequisites: 56 hours completed or graduate standing.

**HSC 504 International Health Education 3(3-0)**

Examines major issues in international health education, exploring the health education opportunities and challenges of addressing specific health problems of countries throughout the world. This course is approved for offering in a distance learning format. Prerequisites: Admission to Graduate Studies, or junior or senior undergraduate standing.

**HSC 505 Work Injury Prevention 3(3-0)**

The study of the etiology, epidemiology, treatment, assessment, and prevention of work-related neuromuscular and musculoskeletal conditions in the workplace. Prerequisites: HSC 211 or HSC 214 or graduate standing.

**HSC 506 Health and Physical Development in Late Life 3(3-0)**

This course examines in depth the processes of normal aging as well as important issues affecting the health of older adults. Prerequisites: BIO 101.

**HSC 507 Introduction to Health Service Organizations and Systems 3(3-0)**

Macro level study of healthcare systems including delivery, integration, reimbursement mechanisms, multi-organizational and inter-organizational arrangements, health policies, and future solutions. This course may be offered in an online format. Prerequisites: Completion of 56 credit hours or graduate standing.

**HSC 508 Education on Sexual Aggression for School/Community 3(Spec)**

This course addresses the realities of sexual aggression, and how schools, corporations, and communities can educate their respective populations on these topics. Identical to PES 508. Credit may not be earned in more than one of these courses.

**HSC 510 Independent Reading Experience 1-4(Spec)**

Individual reading-an experience designed for professional enrichment. 4-hour maximum. CR/NC only. Prerequisite: Permission of Instructor.

**HSC 512 Special Topics in Health Education 1-12(Spec)**

In-depth consideration of relevant, pertinent health issues.

**HSC 516 Travel Course in Health Education 1-15(Spec)**

Topics scheduled to study health education, private and voluntary health care programs, museums, hospitals, health clinics, city and school health programs. Prerequisite: Permission of instructor.

**HSC 517 Drugs and the Elderly 2(2-0)**

An introduction to medication practices and problems among the elderly, and study of selected drugs and their effects on the aging individual. Prerequisites: HSC 390.

**HSC 519 Death Education and Suicide Prevention 3(3-0)**

A holistic study of the cultural, spiritual, legal, ethical, psychological and controversial aspects of death. Emphasis will also be placed on suicide prevention. Prerequisites: must have completed a minimum of 60 semester hours of coursework.

**HSC 520 Health Services Administration 3(3-0)**

Analysis of organizational patterns, planning procedures, fiscal management, personnel management, and other administrative concerns. This course may be offered in an online format. Prerequisites: Sophomore status or higher; or graduate standing.

**HSC 522 Consumer Health Education 2(2-0)**

Issues of consumer health related to the individual, the community, and society.

**HSC 523 AIDS Education 1(1-0)**

A concentrated study of Acquired Immune Deficiency Syndrome including the origin, prevalence, spread, disease process, psychosocial aspects and implications for society. This course may be offered in an online or hybrid format. Prerequisite: HSC 106 or teaching certificate.

**HSC 524 Workshop on Health Fitness 2(Spec)**

Guidelines for fitness appraisals and exercise prescription for healthy and high risk adults.

**HSC 525 Sexually Transmitted Disease Workshop 1(Spec)**

Concentrated study of sexually transmitted diseases, modes of transmission, and role of public health agencies and schools in coping with the problem.

**HSC 526 Behavioral Health 3(3-0)**

Concentrated study of mental health and illness as related to home, school, and community. This course may be offered in an online or hybrid format.

**HSC 527 Sex Education Workshop 1(Spec)**

Concentrated study of sex education and roles of home, school, and community. Not open to students with credit in HSC 222.

**HSC 528 Smoking and Health Education Workshop 1(Spec)**

Concentrated study of physiological, psychological, sociological, and educational aspects of smoking. Not open to students with credit in HSC 235.

**HSC 529 Alcohol Education Workshop 1(1-0)**

Concentrated study of physiological, psychological, and sociological aspects of alcohol education. Not open to students with credit in HSC 235. This course is approved for offering in a distance learning format.

**HSC 530 Drug Abuse Workshop 1(Spec)**

Concentrated study of the effects of drugs and narcotics. Roles of home, school, and community in drug education. Not open to students with credit in HSC 235. This course is approved for offering in a distance learning format.

**HSC 532 Diversity Issues in the Health Professions 3(3-0)**

This course covers diversity issues in order to help students become effective, multiculturally competent health practitioners. Prerequisites: HSC 317 or graduate standing.

**HSC 534 Workshop in Principles of Cardiovascular Health and Disease 1(Spec)**

Concentrated study of the physiological aspects of the cardiovascular system and its adaptation to stress.

**HSC 536 Health Education Assessment 3(3-0)**

Content, skills and application to develop and use assessment and evaluation strategies for health education. Prerequisites: HSC 222, 223, 224 Co-requisites: HSC 340, 346.

**HSC 537 Stress Reduction Workshop 1(Spec)**

Systematic evaluation of stress and methods used to effectively reduce stress to promote and maintain health and wellness. Prerequisite: 50 credit hours completed or graduate standing.

**HSC 538WI Development of Proposals and Reports in Health Administration 3(3-0)**

Emphasize format, content, and writing skills necessary for administration of health programs to prepare grant applications, proposals, reports, and written communications. Writing Intensive. Prerequisites: 56 credit hours completed or graduate standing. Recommended: Signed major in Health Administration or Public Health Education.

**HSC 544 Biostatistics 3(2-1)**

This class presents applied statistical concepts, principles and methods in the health services industry. Statistical procedures are applied to health, administrative, and medical data. Prerequisite: SOC 200QR or STA 282QR or PSY 211QR; or graduate standing

**HSC 545 Health Planning 3(3-0)**

Capstone course that brings together major aspects of managing healthcare organizations and programs into the strategic planning process and methodologies. This course may be offered in an online or hybrid format. Prerequisites: HSC 500, 507, 520, 544. Pre/Co-requisites: HSC 570. Recommended: MKT 300; HSC 333, 538.

**HSC 546 Microcomputer Applications to the Health Sciences 3(3-0)**

Microcomputer applications in school and community health, health services administration, health promotion and exercise science, application of current software utilized by the health fields. Prerequisite: CPS 100 or BIS 104.

**HSC 547 Health Risk Identification and Management 3(3-0)**

Examine cardiovascular and chronic disease risk factors and management of those risk factors with emphasis on current clinical guidelines and lifestyle interventions (e.g., physical activity/exercise). Prerequisites: 56 credit hours completed or graduate standing.

**HSC 550 Stress Test Administration 3(2-2)**

Course in theory and methods of administering exercise stress tests using different modes of exercise and consideration of different populations. Includes classroom and practical experience. Prerequisites: A grade of C or higher in HSC 220 or HSC 420, HSC 308, HSC 310; a signed Exercise Science Major: Clinical Exercise Science Option or a signed Health Fitness in Preventive and Rehabilitative Programs Major; or Exercise Science Graduate Status.

**HSC 551 Stress Testing Interpretation 3(3-1)**

Course in analysis of information gained from exercise testing, studying deviations from normal, and applications of exercise test information in adult fitness and cardiac rehabilitation programs. Prerequisites: HSC 550 with a grade of C or higher.

**HSC 553 Cardiac Medications 2(2-0)**

An examination of classifications, mechanisms of action, indications and names of medications used in treatment of cardiovascular diseases and associated disorders (pulmonary and metabolic diseases). Prerequisites: Admission to the Exercise Science Major: Clinical Exercise Science option or graduate standing.

**HSC 555 Health Education in the Elementary School 3(3-0)**

Various components of the elementary school program: instruction, curriculum, services, and administration.

**HSC 570 Financial Aspects of Health Services Organizations 3(3-0)**

This course addresses the main issues of financial administration of health services organizations. This course may be offered in an online format. Prerequisites: ACC 201 or graduate standing.

**HSC 571 Legal Aspects of Health Services Organizations 3(3-0)**

The issues studied are hospital liability, informed consent, medical staff appointments, tort and health services, and ethical issues related to health-care. Prerequisites: Fifty-six (56) earned undergraduate credit hours; or graduate standing.

**HSC 572 Quality Improvement in Health Services 3(3-0)**

Basics, implementation and application of quality management and improvements specific to health care. Statistical principles and illustrative cases are presented. Recommended: HSC 520.

**HSC 575 Exercise Science Clinical Internship 8(Spec)**

Application of knowledge and skills in an approved, supervised clinical exercise program internship; minimum of 480 hours required. CR/NC only. Prerequisites: Undergraduate students must have completed all courses in the Exercise Science Major: Clinical Option. Graduate students must have completed HSC 310, 411, 547, 550, 551, 553 with grades of C or higher.

**HSC 576 Exercise Science Fitness Internship 8(Spec)**

Application of knowledge and skills in an approved, supervised fitness internship; minimum of 480 hours required. CR/NC only. Prerequisites: Undergraduate students must have completed all courses in the Exercise Science Major: Health Fitness Option. Graduate students must have completed HSC 219, 420, 421, 423, 425 with grades of C or higher.

**HSC 580 Teaching Sexuality and Reproductive Health in Schools 2(2-0)**

A workshop designed to meet PA 226 guidelines for teacher qualifications in sex education and reproductive health by providing insight into the content of quality K-12 sex education programs. Prerequisites: A teaching certificate or approval of the instructor.

**HSC 581 Managed Care: Origins, Organizations, and Operations 3(3-0)**

Covers managed care programs, including Accountable Care Organizations, structures, and practice models, role of physicians and other clinicians, capitation and forms of reimbursement. This course may be offered in an online or hybrid format. Prerequisite: HSC 507. Recommended: HSC 520.

**HSC 586 Cardiovascular Disease Risk Factors in Children 3(1-4)**

Course reviews the major cardiovascular disease risk factors of children. This service learning course requires 45 hours of screening and education of children. Prerequisite: HSC 220.

**HSC 590 Public Health and Social Justice 3(3-0)**

This course provides a comprehensive understanding of social injustice and its impact on public health to help students synthesize and apply concepts to strengthen communities. This course may be offered in an online format. Prerequisites: HSC 317 or ANT 205/SOC 205; or graduate student status.

**HSC 591 Legal & Regulatory Aspects of Long-Term Care 3(3-0)**

This course covers the legal and regulatory issues inherent to the long-term care industry in the United States. In addition, this course serves as preparation for individuals wishing to sit for the National Association of Board of Examiners Exam ("National Exam"). Prerequisites: undergraduate students must have completed 56 credit hours; HSC 571 recommended.

**HSC 592 Administration Issues in Long-Term Care 3(3-0)**

This course covers the facility management issues of long-term care administration, including aspects of business, regulation and human resources. Prerequisites: undergraduate students must have completed 56 credit hours; HSC 570 recommended.

**HSC 593 Resident Care Issues in Long-Term Care Administration 3(3-0)**

This course covers the residential and clinical aspects of long-term care administration. Prerequisites: undergraduate students must have completed 56 credit hours.

**HSC 595 Health Administration Internship 6(6-0)**

This course is the capstone professional experience conducted at a health-care organization where the professional skills, knowledge and behaviors learned in the classroom are applied. CR/NC only. Prerequisites: HSC 507, 520, 545, 570, 571, and 572 and permission of internship coordinator; Recommended: HSC 333, 500, 538, 544; or Graduate Status and permission of internship coordinator.

**HSC 596 Substance Abuse Field Experience 3(Spec)**

Application of substance abuse prevention and substance abuse counseling principles in a licensed substance abuse agency. Experience supervised by a qualified substance abuse professional. CR/NC only. Prerequisites: Completion of all the required courses for the substance abuse minor. Permission of the substance abuse advisor.

**HSC 598 Nature and Dynamics of Destructive Health Habits 3(3-0)**

Etiologies and recovery strategies of substance abuse, eating and sexual disorders and the detrimental health habits which undermine healthy lifestyles. Prerequisites: HSC 235 or graduate standing.

**HSC 599 Internship - Public Health 6(Spec)**

Application of health education and health promotion principles in a community health agency. Experience supervised by a qualified health educator. CR/NC only. Prerequisites: Signed Community Health Education or Public Health Education Major; completion of required courses on the major; permission of instructor; or graduate status; permission of instructor.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**HSC 612 Individualized Learning Experiences 1-10(Spec)****HSC 617 Community and Public Health 3(3-0)****HSC 619 Continuing Registration for Final Research Project 1(1-0)****HSC 620 Adult Health Education Theory and Practice 3(3-0)****HSC 630 Regional Human Anatomy 5(3-4)****HSC 631 Physiology of Exercise 4(3-2)****HSC 632 Cardiopulmonary Exercise Physiology 3(3-0)****HSC 633 Neuromuscular Physiology of Exercise 3(3-0)****HSC 634 Experimental Design in Exercise Science 3(3-0)****HSC 635 Biomechanics of the Musculoskeletal System 3(3-0)****HSC 637 Advanced Exercise Physiology 3(2-2)****HSC 638 Endocrine and Metabolic Responses to Exercise 3(3-0)****HSC 640 Curriculum Design in Health Education 3(3-0)****HSC 646 Methods of Instruction and Allied Health Profession 3(3-0)****HSC 670 Research Methods for Health, Physical Education and Sport, Health and Recreation 3(3-0)****HSC 700 Program Evaluation in the Health Fields 3(3-0)****HSC 727 Professional Seminar 3(3-0)****HSC 791 Independent Study 2-3(Spec)****HSC 797 Directed Research in Exercise Physiology 1-6(Spec)****HSC 798 Thesis 1-6(Spec)**



## HSL - Health Systems Leadership

Contact the School of Health Sciences for more information.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**HSL 611 Healthcare Administration and Ethical Compliance 3(3-0)**

**HSL 621 Healthcare Operations and Structures 3(3-0)**

**HSL 631 Healthcare Law, Compliance and Risk Management 3(3-0)**

**HSL 641 Health Economics and Policy Implications 3(3-0)**

**HSL 651 Fundamentals of Healthcare Finance 3(3-0)**

**HSL 661 Healthcare Planning & Marketing 3(3-0)**

## HST - History

See the Department of History, World Languages, and Cultures for more information.

**HST 100WI Reconstructing the Past: An Introduction to the Study of History 3(3-0)**

How do historians interpret the past? This course focuses on historical research and writing, including locating and assessing sources such as letters, diaries, and documents. Writing Intensive.

**HST 101 The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)**

The people, empires, and ideas that forged the history of Europe and the Western world, from the first cities to the Scientific Revolution. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**HST 102 The Development of Western Civilization: From 1700 to the Present 3(3-0)**

The modern world was made in Europe between 1700 and 1950. Find out how and why in this survey of events, personalities, and ideas. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**HST 106 Twentieth Century: Western World Issues 3(3-0)**

Analyzes issues of contemporary importance in the Western world, such as world wars, women's rights, the rise of dictatorships, and the threat of nuclear war. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**HST 110 The American Experience 3(3-0)**

Thematic survey of American history. Possible topics include: changing concepts of American democracy, the role of the frontier, immigration, labor and business in America. May be offered as Writing Intensive (University Program Group I-A: Human Events and Ideas)

**HST 111 The Quest for Liberty: The United States to 1865 3(3-0)**

Explores the U.S.'s emergence from imperial colonies into a nation "dedicated to the proposition that all men are created equal," and antebellum struggles toward equality. May be offered as Writing Intensive. (University Program III-B: Studies in Social Structures)

**HST 112 The Struggle for Equality: The United States, 1865-Present 3(3-0)**

A broad and interpretative study of the United States since the Civil War. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**HST 120 Unlikely Princesses: Women of World History 3(3-0)**

An examination of "dangerous" women in world history who would not make good cartoon princesses. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**HST 160 History of Game Design 3(3-0)**

Examines the development of modern tabletop and video games (e.g., Catan, Dungeons & Dragons, Pokémon, Minecraft) with a focus on design and cultural impact. Identical to ENG 160. Credit may not be earned in more than one of these courses. This course may be offered in an online format. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

**HST 163 The Latin American Experience 3(3-0)**

Latin American history and cultures from the Inca and Aztec empires to the Columbian and Mexican Drug Wars. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**HST 168 Modern East Asia 3(3-0)**

Explores the history of China, Japan, and Korea from the age of the samurai to the Beijing Olympics (1600-present). May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**HST 176 The African Experience 3(3-0)**

A survey of the history of Africa from prehistory to Post-Colonial Africa. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition.)

**HST 200 Medieval Civilization 3(3-0)**

Explores the events and cultural developments of the Middle Ages, the period in European history satirized so brilliantly in "Monty Python and the Holy Grail." May be offered as Writing Intensive. May be offered in an online format. (University Program Group I-A: Human Events and Ideas)

**HST 201 World History to 1500 3(3-0)**

A survey of selected political, economic, social, religious, intellectual, and cultural elements in the history of the world from ancient times to 1500 CE.

**HST 202 World History since 1400 3(3-0)**

A survey of selected political, economic, social, religious, intellectual, and cultural elements in the history of the world since 1400 CE.

**HST 210WI United States History through Michigan Eyes 3(3-0)**

Explores how people living in Michigan shared with others in North America the changes introduced by the colonization, expansion, and development of the United States. Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**HST 215 The American Civil War: A House Divided 3(3-0)**

An examination of the causes, course, and consequences of the American Civil War from multiple perspectives. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**HST 221 Growing Up in America 3(3-0)**

Learn how childrearing, family life, education, and the transition to adulthood have changed from colonial times to the present. May be offered as Writing Intensive. May be offered in an online format. (University Program Group III-B: Studies in Social Structures)

**HST 222WI Cherokees, Slaves and the Struggle for Racial Justice 3(3-0)**

This course uses case studies involving Cherokee Indian Removal and the abolition of slavery as a way to explore American ideas about race, citizenship and individual rights in the years before the Civil War. Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**HST 226 From Witch Trials to Women's Liberation: Women in America 3(3-0)**

Study of the position of women in American society as documented in historical, literary, and biographical sources. Identical to WGS 226. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**HST 228 American Business: A History 3(3-0)**

A history of American business with primary emphasis on the role of individuals and the evolution of institutions-partnerships, corporations, and conglomerates.

**HST 236 Babylon and Beyond: Ancient Civilizations of the Near/Middle East 3(3-0)**

The origins and florescence of the earliest civilizations of the Near/Middle East from the Neolithic to the death of Alexander the Great (323 BCE). May be offered as Writing Intensive. May be offered in an online format. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**HST 237 Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)**

An examination of the history and cultures of the Middle East from the origins and expansion of Islam until modern times. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**HST 238 Ancient Greece and Rome 3(3-0)**

Political, social, intellectual, and cultural developments in the history of ancient Greece and Rome to AD 565. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**HST 254 Women in European History 3(3-0)**

This survey emphasizes the contributions of women to European history including religious beliefs, family structures, diversity, and the control of knowledge and sexuality. Identical to WGS 254. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**HST 255 Beyond Rosie the Riveter: Selected Topics on Women and Work in United States History 3(3-0)**

This course investigates major themes in US women's history including slavery and servitude, industrialization, women in the professions, and inequality in the modern workforce. This course may be offered in an online format. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**HST 260 Games, History, and Conflict 3(3-0)**

Games and play are a part of what it means to be human. In this course we look at their role in the midst of cultural conflict in Spain and Latin America. (University Program Group I-A: Human Events and Ideas)

**HST 261 Indigenous Peoples of Latin America: Precontact to 1821 3(3-0)**

This course explores continuity and change in the culture and society of the indigenous peoples of Latin America from the precontact period to 1821. Recommended: Any Latin American and/or Native American history course.

**HST 280 Nazi Germany and the Holocaust 3(3-0)**

An examination of the events and ideas in Germany and elsewhere that produced the Nazi state and the Holocaust.

**HST 297 Special Studies 1-6(Spec)**

Each offering studies a selected historical topic using readings, discussion, lecture, and research as appropriate. May be repeated when the content is not a duplication of a previous special topics offering.

**HST 300 A Mid-tier Experience for History Majors: Teaching History in Secondary Schools 2(1-2)**

The Mid-tier Experience provides observations and small-group instructional opportunities for students seeking secondary certification in history. Course includes both campus instruction and field work. CR/NC only. Prerequisites: completion of a minimum of 15 hours of history on a signed major; Tier Two - Admission of Candidacy to Teacher Education; junior standing.



**HST 301 The Craft of History 4(4-0)**

Study of history as a scholarly discipline with emphasis given to historical theory, concepts, methodology, fields, and the history of historical thinking and writing. Specific topics and materials will vary from semester to semester. Prerequisites: Nine hours of history and a signed major or minor in history.

**HST 302 Comparative Environmental History 3(3-0)**

Investigate complex relationships between humans and nature, considering such questions as why weeds, pigs, and germs were more important in colonial expansion than military campaigns.

**HST 303 The American Revolution 3(3-0)**

Explores the Revolutionary War's causes and course; political, social, and cultural changes of the period; and the formation of the Constitution. May be offered as Writing Intensive.

**HST 312 American Military Experience 3(3-0)**

The role of American armed forces in peace and war. As social institutions the armed forces reflect political, social, and economic developments of the time. This course is approved for offering in a distance learning format.

**HST 315 The Vietnam War 3(3-0)**

Examines the modern conflicts in Vietnam, the American experience in Indochina from 1945 to 1975, and the war's implications for the United States.

**HST 319 The United States since World War II 3(3-0)**

Explores the major postwar political, economic, and social developments, including the Cold War, civil rights, Vietnam, the counterculture, political scandals, liberalism, conservatism, and global conflict.

**HST 320 United States Social History to 1865 3(3-0)**

Examines social structures in early America-including family life, religion, and slavery - and analyzes the nineteenth-century origins of modern socioeconomic institutions. This course may be offered in an online or hybrid format. May be offered as Writing Intensive.

**HST 321 United States Social History since 1865 3(3-0)**

Examines the experiences of different class, age, gender and ethnic groups in America; stresses the historical roots of current social problems. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**HST 322 Westward Movement in America 3(3-0)**

The impact of territorial expansion in the United States upon economics, culture, and politics.

**HST 323 History of Native Americans 3(3-0)**

This course analyzes the study of Native peoples of North America before Columbus and the inter-relationships between the Native peoples and European immigrants after Columbus. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**HST 324 "Death is Better than Slavery": African American History to 1877 3(3-0)**

Explores African American social, cultural, and political life from the origins of the transatlantic slave trade to the late nineteenth century. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**HST 325 "By Any Means Necessary": African American History, 1877-Present 3(3-0)**

Explores African American social, cultural, and political life from the late nineteenth century to the present, including the modern civil rights movement. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**HST 328 Technology in American History 3(3-0)**

Examines the role of technology in the economic, social and cultural history of the United States from the colonial era to the early 21st century. Recommended: At least 12 hours of humanities or social science courses.

**HST 329 Film and the Politics of Gender, 1960-Present 3(3-0)**

This course uses top-grossing films and written texts as primary sources to trace the popular debate over feminism from the early 1960's until the present. Prerequisite: HST 112 or 326 or WGS 328.

**HST 330 "We the People": U.S. Constitutional History 3(3-0)**

Historical overview of the critical events and ideologies that shaped the U.S. Constitution and the judicial interpretation of it since 1787. May be offered as Writing Intensive.

**HST 331WI Time Travelers for Social Justice 3(3-0)**

This course explores the power dynamics of ethnic, religious, colonial, gender and class discrimination through two case studies: American suffrage/labor activism (1913), Indian independence (1947). Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**HST 333 History of Michigan 3(3-0)**

A study of the development of Michigan from earliest settlement by Native Americans to the present, focusing on economic, social, and political history.

**HST 335 History of the Rock and Roll Era 3(3-0)**

The historical origins and evolution of rock music, from "Rock Around the Clock" to "Smells Like Teen Spirit." History like you've never heard it before. (University Program Group I-B: The Arts)

**HST 336 Iran and Iraq in History 3(3-0)**

An examination of the interrelated histories of Iran and Iraq from the emergence of the first cities and states around 4000 BCE to the present.

**HST 338 The Decline and Fall of the Roman Empire 3(3-0)**

War, politics, society, religion, and culture in the Mediterranean world of the later Roman empire (c. 250-650 AD).

**HST 341 Renaissance and Reformation 3(3-0)**

Social, cultural, intellectual, and political history of the Renaissance and Reformation movements in Europe from ca. 1350 to ca. 1650. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**HST 342 The Culture of Renaissance Italy (Study Abroad) 3(Spec)**

Renaissance Italy (4 weeks on site) as it survives in texts, churches and museums of the five major Renaissance cultural centers: Milan, Venice, Florence, Rome and Naples.

**HST 343 History of Paris 3(3-0)**

This course addresses key moments in the history of France's capital from an interdisciplinary perspective. Recommended: Any European history and/or French literature/culture courses.

**HST 344 Modern Europe, 1815-1918 3(3-0)**

The economic, political, social, cultural, and diplomatic developments in Europe from the close of the Napoleonic era to the end of World War I.

**HST 346 The World of Versailles: Power and the Politics of Splendor in 17th-Century France 3(3-0)**

Examines how Louis XIV of France employed "the politics of splendor," that is using the arts as a means to acquire and legitimize political power. Recommended: 9-12 hours of course work in the humanities. (University Program Group I-B: The Arts)

**HST 347 The French Revolution and Napoleonic Period 3(3-0)**

Origin and development of the French Revolution and the role of Napoleon in European history, 1787-1815.

**HST 348 Russia through the Reign of Catherine the Great 3(3-0)**

A social, cultural, and political study of Russia from the ninth to the eighteenth century.

**HST 349 Russia in the Nineteenth and Twentieth Centuries 3(3-0)**

A social, cultural, and political study of Russia in the nineteenth and twentieth centuries.

**HST 350 English History to 1688: From Stonehenge to the Glorious Revolution 3(3-0)**

Explores over two thousand years of history from prehistoric times to the revolutions of the 1600s, including the reigns of the Tudor and Stuart monarchs.

**HST 353 Germany since 1870 3(3-0)**

The German experience since the formation of the Empire, including the processes, problems, and aftereffects of wars, revolutions, constitutions, totalitarianism, and peace.

**HST 356 Europe Since 1945 3(3-0)**

A study of political, social, economic and cultural change in Europe from the end of the Second World War to the present. Identical to EUR 302. Credit may not be earned in more than one of these courses.

**HST 361 Sinners and Saints of Colonial Latin America 3(3-0)**

Examines the interaction of European, African, and Native American religions and the "heresies" that developed as a result of their interaction during the colonial period. Identical to REL 361. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**HST 362WI Revolutions in Latin America 3(3-0)**

Twentieth-Century Latin American Revolutions. Writing Intensive. Recommended: HST 163.

**HST 369 Traditional China 3(3-0)**

A study of the political, social, and cultural history of China from earliest times to the nineteenth century.

**HST 370 Modern China 3(3-0)**

The political and social history of China from the Opium War to the present.

**HST 375 Continuity and Change in Contemporary Africa, 1960s to the Present 3(3-0)**

This course covers contemporary Africa from independence through military dictatorship, globalization, and democratization. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**HST 376 East/Central Africa: Issues 3(3-0)**

Explores a varying selection of issues concerning historic and contemporary patterns of political and economic organizations, international relations in Ethiopia, Somalia, Rwanda, Zaire, Uganda, Kenya.

**HST 377 West Africa 3(3-0)**

An overview of West African history emphasizing the post-1800 period and especially developments since independence.

**HST 378 South Africa 3(3-0)**

The conflict between European immigrants and indigenous Africans; the effects of white minority rule, including apartheid; successful African efforts to achieve majority rule.

**HST 379 Race, Class and Power: South Africa in the 20th Century 3(3-0)**

The course explores the apartheid system and the challenges it faced from liberalism, Black Nationalism, and Marxism. It also examines post-apartheid South Africa. Identical to HUM 340. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**HST 382 History of Israel 3(3-0)**

Israel and Palestine from ancient times to the present, including background to contemporary Zionism and the conflict with Arab nationalism. Identical to REL 382. Credit may not be earned in more than one of these courses.

**HST 397 Special Studies 1-6(Spec)**

Each offering studies a selected historical topic using readings, discussion, lecture, and research as appropriate.

**HST 400 Teaching History in Secondary Schools 3(3-0)**

Translates the study and methodology of history into teaching practices appropriate for secondary schools, and evaluates recent proposals for improving history instruction. Prerequisites: Admission to Teacher Education; 18 hours of history, or current enrollment in 18th hour; 3.0 GPA in history major or minor or elementary social studies major (History concentration).

**HST 491 Independent Research 1-3(Spec)**

Research and writing on a topic selected in consultation with an instructor. HST 491 may not be used as a substitute for HST 496. Prerequisites: junior or senior standing with B average in 12 hours of history; permission of instructor and the department chairperson.

**HST 496WI Research Seminar 3(3-0)**

Historical research and writing. This course or an arranged substitute required on all majors. Writing Intensive. Prerequisite: HST 301.

**HST 497 Special Studies 1-6(Spec)**

Each offering studies a selected historical topic using readings, discussion, lecture, and research as appropriate. Prerequisite: permission of instructor.

**HST 498 Honors Thesis 3(Spec)**

The student, with guidance from a thesis advisor, researches and writes an undergraduate thesis. Prior written approval by thesis advisor and chairperson required. Prerequisites: completion of 90 credit hours, including 24 credit hours in History.

**HST 505 Tudor England 3(3-0)**

The political, religious, socio-economic and cultural life of England under the Tudors, focusing on the reigns of Henry VIII and Elizabeth I. May be offered as Writing Intensive. Prerequisites: One of HST 101, HST 102, HST 350, HST 351; or graduate status.

**HST 511 Colonial British America 3(3-0)**

Explores the social, cultural and political development of British America in the seventeenth and eighteenth centuries. May be offered as Writing Intensive. Prerequisite: One of the following: HST 111, 323, 324, 326, 351; or graduate status.

**HST 513 Era of the Early Republic, 1789-1825 3(3-0)**

An investigation of nation-building, the formation of new institutions, ideologies, decision-making, and personalities during the precarious decades following the American Revolution. May be offered as Writing Intensive. Prerequisites: One of HST 110, 111, 301; or graduate status.

**HST 515 Civil War and Reconstruction 3(3-0)**

Causes and process of secession, the conduct of war, and the reconstruction of the South to 1877. May be offered as Writing Intensive. Prerequisite: One of HST 111, 320; or graduate status. Recommended: While this course does not require or expect detailed knowledge of the Civil War, students should be broadly familiar with basic periods and developments in nineteenth century America.

**HST 516 Emergence of Modern America, 1877-1920 3(3-0)**

Social, political, cultural, and economic developments from the end of Reconstruction through the Progressive era. May be offered as Writing Intensive. Prerequisite: HST 112 or 321; or graduate status.

**HST 522 Indians of the Great Lakes Region 3(3-0)**

This course focuses on the American Indian people in the Great Lakes Region, from early European contact through the nineteenth century. May be offered as Writing Intensive. Prerequisites: One of the following: HST 111, 323, or graduate standing.

**HST 524 American Diplomatic History Since 1898 3(3-0)**

This course examines US history in a global context, analyzing interactions between the United States and other nations from the Spanish-American War to the present. Prerequisites: Junior standing or admission to the graduate program.

**HST 526 Modern American Political Culture, 1865-Present 3(3-0)**

Using cultural texts such as films, novels, monographs and lectures, this course examines American politics and political culture from 1865 to the present. Recommended: HST 112 or PSC 105 and 9 additional hours of history or political science; or graduate standing.

**HST 532 Michigan History Studies 1-3(Spec)**

Individual and group studies in regional and local Michigan history.

**HST 537 The Age of Cicero 3(3-0)**

Political, economic, social, and cultural history of the late Roman republic (c. 133-27 BC), emphasizing modern historiography and ancient sources in English translation. May be offered as Writing Intensive. Prerequisite: One of HST 101, 238, 338; or graduate status. Recommended: While this course does not require or expect detailed knowledge of Roman history, students should be broadly familiar with basic periods and developments in the ancient Mediterranean world.

**HST 542 The Enlightenment in Europe 3(3-0)**

The social, cultural, political and intellectual history of Europe in the late seventeenth and eighteenth centuries. Recommended: 6 hours of European history before 1815.

**HST 543 Napoleon 3(3-0)**

This course will examine the period dominated by Napoleon Bonaparte (1795-1815) and its political, social, and cultural impact on European and transnational history. May be offered as Writing Intensive. Recommended: 9 hours of history coursework or graduate standing.

**HST 558 Europe, 1914-1945 3(3-0)**

Political, social, and economic change in Europe from the First World War through the Second; emphasis on fascism and the failure of democracy. May be offered as Writing Intensive. Prerequisite: HST 102 or 106 or graduate status.

**HST 560 Mind Games 3(3-0)**

Students propose, design, and develop role-playing and other face-to-face games for use in the world history classroom. This course may be offered in an online format. Prerequisite: 300-level writing intensive course and 56 credit hours or graduate standing.

**HST 576 Colonialism in Africa, 1880s-1960s 3(3-0)**

Africa on the eve of European colonization, the colonization of Africa, the struggle for independence, the post-independence period, neo-colonialism, the Cold War and globalization. May be offered as Writing Intensive. Prerequisites: HST 176, 201 or 202, or graduate standing.

**HST 580 Public History 3(3-0)**

Discover why public historians are on the cutting edge, preserving and interpreting our heritage as writers, researchers, curators, media personalities, policy analysts, archivists, and more. May be offered as Writing Intensive. Prerequisites: HST 301 and MST 310; or graduate status.

**HST 583 Archival Administration 3(3-0)**

A practical introduction to archives theory, management, and issues; hands-on learning experience with primary source materials. Prerequisites: HST 301 and MST 310; or graduate standing.

**HST 585 Oral History 3(3-0)**

An introduction to the methodology and use of Oral History in historical research, interpretation, and documentation. May be offered as Writing Intensive. Prerequisites: HST 301 and MST 310; or graduate status.

**HST 590 Readings in History 1-6(Spec)**

Focused readings on a special topic to be arranged with the instructor. Prerequisite: Junior standing with a 3.0 average in 12 hours of history or graduate standing, plus the consent of the instructor and the Director of Graduate Studies.

**HST 595 Internship in Public History 1-6(Spec)**

Enter the growing field of applied history through a supervised hands-on experience chosen to match your interests. Prerequisites: Permission of academic advisor and work supervisor.

**HST 597 Special Studies 1-6(Spec)**

Study of a selected historical topic at a level suitable for advanced undergraduates or graduate students. Recommended: 12 hours of HST.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**HST 600 Historiography 3(3-0)****HST 601 Colloquium in Transnational and Comparative History 3-6(3-0)****HST 602 Colloquium in U.S. History to 1865 3-6(3-0)****HST 603 Colloquium in U.S. History Since 1865 3-6(3-0)****HST 609 Historiography for Teachers 3(3-0)****HST 610 Colloquium in U.S. History Topics for Teachers 3-12(3-0)****HST 611 Colloquium in World History Topics for Teachers 3-12(3-0)****HST 619 Continuing Registration for Final Research Project 1(1-0)****HST 624 Colloquium in African American History 3-6(3-0)****HST 636 Colloquium in Ancient History 3-6(3-0)****HST 651 Colloquium in Early Modern European History 3-6(3-0)****HST 652 Colloquium in Modern European History 3-6(3-0)****HST 663 Colloquium in Colonial Latin American History 3-6(3-0)****HST 676 Comparative History of Slavery Colloquium 3-6(3-0)****HST 681 Historic Preservation 3(3-0)****HST 690 Advanced Readings 1-9(Spec)****HST 695 Special Studies Abroad 1-15(Spec)****HST 696 Research Seminar for Accelerated MA 3(3-0)****HST 697 Special Studies Colloquium 3-6(3-0)****HST 700 Practicum in College Teaching 3(3-0)****HST 710 Seminar in Intellectual and Cultural History 3-6(3-0)****HST 711 Seminar in Colonial and Revolutionary America 3-6(3-0)****HST 713 Seminar in the History of Nineteenth Century America 3-6(3-0)****HST 717 Seminar in the History of Twentieth Century America 3-6(3-0)****HST 723 Seminar in American Diplomatic History 3(3-0)****HST 724 Seminar in African American History 3-6(3-0)****HST 738 Seminar in Ancient History 3-6(3-0)****HST 740 Seminar in Medieval History 3-6(3-0)**

**HST 741 Seminar in Early Modern Europe 3-6(3-0)**  
**HST 742 Seminar in Eighteenth-Century European History 3(3-0)**  
**HST 744 Seminar in Nineteenth-Century European History 3-6(3-0)**  
**HST 758 Seminar in Twentieth-Century European History 3-6(3-0)**  
**HST 763 Seminar in Latin American History 3(3-0)**  
**HST 766 Seminar in Asian History 3(3-0)**  
**HST 776 Seminar on African Diaspora History 3-6(3-0)**  
**HST 791 Graduate Research 3-6(Spec)**  
**HST 792 Research Seminar 3-12(3-0)**  
**HST 795 Seminar Abroad 1-15(Spec)**  
**HST 798 Thesis 1-9(Spec)**  
**HST 799 Dissertation/Thesis Writing Workshop 1-10(1-0)**  
**HST 890 Doctoral Readings 1-9(Spec)**  
**HST 898 Dissertation 1-36(Spec)**

## HUM - Humanities

*Contact the College of Liberal Arts and Social Sciences for more information.*

**HUM 101 Introduction to the Humanities 3(3-0)**  
 Introduction to the study of selected topics in the humanities from various perspectives (historical, literary, religious, philosophical) in small group discussion (seminar) format.

**HUM 197 Special Studies in Humanities 1-12(Spec)**  
 HUM 197 is primarily for freshman and sophomores; 397 is primarily for juniors and seniors; 597 is primarily for graduate students. Prerequisite: Permission of instructor.

**HUM 202 Age of Charlemagne 3(3-0)**  
 Artistic, cultural, economic, and political study of the Carolingian period of the Middle Ages. Special emphasis placed on the reign of Charlemagne and the Carolingian Renaissance. Prerequisites: ART 185; HST 200.

**HUM 301 Medieval Synthesis: Love in the Middle Ages 3(3-0)**  
 An integrative, interdisciplinary seminar (employing history and literary criticism) examining love in its many medieval guises, e.g., love of God, of family, erotic love, and illicit love. Pre/Co-Requisites: ENG 362; HST 200 or HST 340.

**HUM 303 Law and Society: Great Trials 3(3-0)**  
*Interdisciplinary study of law, from the classical world to modern times, focusing on ethical, jurisprudential, political and legal components of trials of major historical figures. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)*

**HUM 340 Race, Class and Power: South Africa in the Twentieth Century 3(3-0)**  
*The course explores the apartheid system and the challenges it faced from liberalism, Black Nationalism, and Marxism. It also examines post-apartheid South Africa. Identical to HST 379. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**HUM 370 The Age of Augustus 3(3-0)**  
 Literature, history, art, and culture of the Roman world under its first emperor.

**HUM 397 Special Studies in Humanities 1-12(Spec)**  
 HUM 197 is primarily for freshman and sophomores; 397 is primarily for juniors and seniors; 597 is primarily for graduate students. Prerequisite: Permission of instructor.

**HUM 430 Self and Identity in American Life 3(3-0)**  
 This interdisciplinary honors seminar explores identity formation in American life. Students explore major theories of identity formation and apply them to different dimensions of identity. Prerequisite: Junior or senior status.

**HUM 510 Words and Music: A Theatrical Partnership 4(4-0)**  
 The course considers musical theater as a unique art form, combining music, literature, and stagecraft into a whole greater than the sum of its parts. Prerequisites: Junior standing or above; any 300-level course in music, English, foreign language, or theater and interpretation.

**HUM 597 Special Studies in Humanities 1-12(Spec)**  
 Prerequisite: permission of instructor.  
*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**HUM 610 Seminar in American Individualism 3(3-0)**  
**HUM 619 Continuing Registration for Final Research Project 1(1-0)**  
**HUM 697 Independent Study 3-6(Spec)**  
**HUM 797 Special Topics in Humanities 1-12(Spec)**  
**HUM 799 Thesis 1-6(Spec)**

## IET - Industrial and Engineering Technology

*See the School of Engineering and Technology for more information.*

**IET 116 General Drafting 3(2-2)**  
 An introduction to the language of industry; includes lettering, sketching, pictorials, multiview projection, dimensioning, auxiliaries, sections, developments, and computer-assisted drafting. Requires no previous experience.

**IET 120 Introduction to Engineering Technology 3(3-0)**  
 A survey of the engineering world with a technologist's perspective to provide the skills and knowledge required to pursue an engineering technology career. Recommended: MTH 105.

**IET 130 Industrial Materials and Testing 3(2-2)**  
 An overview of industrial materials including metals, plastics, composites and ceramics. Topics include material properties, material selection, and material testing.

**IET 143 Introduction to Graphic Arts 3(2-2)**  
 Letterpress, gravure, screen printing, bookbinding, and basic principles and processes of graphic reproduction.

**IET 154 Engineering Design Graphics 3(2-2)**  
 Focus on engineering design fundamentals, design processes, and the utilization of graphics within design. Computer-Aided design and product data management techniques are covered.

**IET 160 Wood Technology 3(1-4)**  
 Design, development, and construction of wood prototypes, utilizing appropriate wood materials and supplies, involving efficient and safe use of tools, machines, and industrial processes.

**IET 170 Manufacturing Processes I 3(1-4)**  
 Introduction to the processing of metal materials through casting, fabricating, machining, and basic welding.

**IET 180 Power and Energy Technology 3(2-2)**  
 An introductory study of operational and scientific principles related to energy sources used as prime movers. To include gasoline, diesel, rotary, turbine, and jet engines.

**IET 181QR Alternative Energy Analysis 3(2-2)**  
 A quantitative comparison and analysis of current alternative energy technologies and systems. Quantitative Reasoning.

**IET 182 Automobile Ownership and Maintenance 2(1-2)**  
 Consumer protection course designed to provide fundamental mechanical understanding of the automobile. Lab activities include light repair and essential maintenance procedures.

**IET 223QR Lean Six Sigma for Process Improvement 3(3-0)**  
 The utilization of mathematical and statistical tools to improve product and process quality. This course may be offered in an online or hybrid format. Quantitative Reasoning. Prerequisite: MTH 105; permission of E&T advisor; cumulative GPA of 2.5 or higher. Recommended: STA 282.

**IET 226 Parametric Design and Modeling 3(2-2)**  
 Development and production of engineering and technical models with a mechanical computer-aided design system. An introduction to parametric design and modeling. Prerequisite: IET 154; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 261 Construction Surveying 3(2-2)**  
 A study of basic surveying applications in the planning, design, layout, and construction of our physical environment and infrastructure. Prerequisite: MTH 106 or 130; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 279 Applied Statics 3(3-0)**  
 Explores resultants, static equilibrium in trusses, frames, beams, and machines. Includes centroids, mass moment of inertia, and systems involving friction and distributed loads. Prerequisites: One of the following: MTH 130, 132, 133; PHY 130 or 145; PHY 170 or 175; permission of E&T Advisor; cumulative GPA of 2.5 or higher.

**IET 281 Dynamics 3(3-0)**  
 Study and engineering application of relationship between the forces acting on a body, the mass of the body, and the motion of the body. Prerequisites: IET 279 or EGR 251 with a C- or better; EGR 200 with a C- or better; MTH 132 or 133; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 284 Fluid Power Technology 3(2-2)**  
 A study of hydraulic and pneumatic technologies related to the generation, transmission, and control of fluid power in fluid power systems. Prerequisites: MTH 130 or IET 180; permission of E&T advisor; cumulative GPA of 2.5 or higher. Recommended: IET 120 or MTH 105.

**IET 291 Applied Circuits 3(2-2)**  
 A study of the fundamentals of applied circuits including Direct Current (DC) circuits, Alternating Current (AC) circuits, and basic electronics. Prerequisites: One of the followings: MTH 130, 132, 133; PHY 131 or 146; PHY 171 or 176; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 324WI Product Design and Development 3(2-2)**  
 Ideation, conceptualization, and development of consumer products. Utilization of freestyle and NURBS based computer-aided design tools to solve product design problems. Writing Intensive. Prerequisite: IET 226; permission of E&T advisor; cumulative GPA of 2.5 or higher.



**IET 326 Manufacturing Methods Analysis 3(3-0)**

Study of methods, materials, tools, and equipment for productivity measurements and improvement. Prerequisites: IET 170; one of: STA 282, 382, 392; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 327 Industrial Safety 3(2-2)**

A study of the principles and practices of safety management with emphasis on occupational safety standards and loss control. Prerequisite: CHM 131 or CHM 141; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 350 Mechanism Design 3(3-0)**

Study of mechanisms with graphical and analytical analysis of displacement, velocity, acceleration, motion, gearing, gear trains, linkages, and cams. Prerequisite: IET 279 or EGR 251 with a grade of C- or better; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 352 Applied Fluid Mechanics 3(3-0)**

Introduction to principal concepts and methods of fluid mechanics. Topics include pressure, hydrostatics, buoyancy; mass and momentum conservation; flow through pipes; and pumps. Prerequisites: IET 281 or EGR 253; EGR 200 with a C- or better; Permission of E&T Advisor; cumulative GPA of 2.5 or higher.

**IET 356 Thermodynamics 3(3-0)**

Study of thermodynamics and basic tools necessary to obtain quantitative solutions to common engineering applications involving energy and its conversion, conservation and transfer. Prerequisites: PHY 145QR, 175 or PHY 130QR, 170; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 357 Residential Architectural Graphics 3(1-4)**

Modern house planning resulting in a complete set of plans and specifications. This course is approved for offering in a distance learning format. Prerequisites: permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 358 Light Commercial Architectural Graphics 3(2-2)**

Development of the architectural drawing techniques, basic construction methods and materials, details, and planning for light commercial building. Prerequisite: Permission of E&T advisor; cumulative GPA of 2.5 or higher. Recommended: IET 357.

**IET 360 Advanced Wood Technology 3(2-2)**

Design, development and construction of wood prototypes in an advanced area of specialization including: bending, veneering, furniture construction, and use of jigs and fixtures. Prerequisites: IET 116, 160; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 361 Construction Technology 3(1-4)**

Laboratory and classroom experience designed to develop skills and knowledge relating to noncommercial construction. Field experiences are used when applicable. Prerequisite: permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 363 Building Code Enforcement 3(3-0)**

A comprehensive study of construction building code enforcement. Topics will include the permit process, inspection process, and the legal aspects of building code enforcement. This course is approved for offering in a distance learning format. Prerequisite: permission of E&T advisor; cumulative GPA of 2.5 or higher. Recommended: IET 361.

**IET 365 Manufacturing Processes II 3(2-2)**

Introduces basic polymer formulation, properties of plastics materials, methods of molding plastics, and the fabrication and decoration of plastic articles. Prerequisites: CHM 131 or 141; IET 130, 170; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 367 International Building Codes 3(3-0)**

Comprehensive study of the International Building Codes. Topics include International Building, Electrical, Plumbing, Mechanical, and Fire Codes. This course is approved for offering in a distance learning format. Prerequisite: permission of E&T advisor; cumulative GPA of 2.5 or higher. Recommended: IET 361.

**IET 368 International Residential Code 3(3-0)**

Comprehensive study of International Residential Code for One and Two-Family Dwellings. Topics include all residence code requirements for building a home according to IRC 2000. This course is approved for offering in a distance learning format. Prerequisites: permission of E&T advisor; cumulative GPA of 2.5 or higher. Recommended: IET 361.

**IET 375 Robotics 3(2-2)**

Introduction to industrial robotics, including robot terms, classifications, coordinate systems, components and operation, and programming. Prerequisites: CPS 180 or EGR 200; IET 291 or EGR 290; One of: MTH 132, 133, 217; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 377 Computer Numerical Control Programming 3(2-2)**

Programming and operation of CNC machines, including CNC vertical milling center and turning center. Emphasis on manual programming, CAM design, and machine setup and operation. Credit may not be earned in both EGR 377 and IET 377. Prerequisites: IET 154, 170; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 379 Mechanics of Materials 3(3-0)**

Introduction to methods of determining the internal stresses and deflections of basic load-carrying members of construction and machine applications. Prerequisites: IET 279 or EGR 251 with a C- or better; EGR 200 with a C- or better; MTH 132 or 133; Permission of E&T Advisor; cumulative GPA of 2.5 or higher.

**IET 385 Automotive Engines 3(1-4)**

Design, construction, operation, and service procedures involved in both reciprocating and rotary engines. Prerequisites: permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 390 Discrete Device Theory 3(2-2)**

A comprehensive study of discrete devices and circuits, including diodes, transistors, single and multistage amplifiers, frequency response, and integrated operational amplifiers. Prerequisite: IET 292; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 397 Special Studies 1-6(Spec)**

Individual investigation and research to increase ones technical competency. Prerequisites: Cumulative GPA of 2.5 or higher.

**IET 400 Senior Seminar 1(1-0)**

This seminar format will be used to prepare students to take the Certified Industrial Technologist (CIT) Exam and for graduation. Open to graduating seniors only. CR/NC Only. Prerequisites: Final Semester of Program of Study of ITM Majors; cumulative GPA of 2.5 or higher.

**IET 420 International Engineering Technology 1-6(Spec)**

Engineering and technology applications, issues, and perspectives in international settings. Travel abroad required. May be repeated once. Any interested students should contact the IET Department. Prerequisites: 12 hours of IET credit; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 424 Human Factors and Ergonomics 3(3-0)**

The study of methods and tools used in the fields of human factors and ergonomics to design and improve jobs, tasks, and products. This course may be offered in all formats. Prerequisite: IET 226; IET 324 or 327; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 425 Industrial Internship 2-8(Spec)**

Supervised work experiences in industry. CR/NC only. Prerequisite: departmental permission.

**IET 426 Plant Layout and Materials Handling 3(3-0)**

Study of plant layout through the development of overall layout including location, planning, detailing, diagrams, and design of manufacturing and service facilities for efficient flow. Prerequisite: IET 326; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 427 Product Reliability and Safety 3(3-0)**

A study of product reliability and safety factors affecting the design, production, distribution, sales, and use. Prerequisite: 12 hours of IET coursework; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 428 Manufacturing Quality 3(3-0)**

Study of specific quality techniques used by production departments to monitor processes, products, and reliability so quality can be improved. Prerequisite: STA 282 or 382; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 429 Occupational Competency 1-30(Spec)**

Credit by examination for work experience of background in a given technical area for which no transferable credit has been earned. Prerequisites: certified record of work experience; approval of the department chairperson; cumulative GPA of 2.5 or higher.

**IET 435 Curriculum Development and Facility Planning 3(3-0)**

Principles of curriculum development and facility planning. Prerequisite: Open only to seniors; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 437 Independent Study 2-5(Spec)**

Individual investigation and research to increase ones technical competency. Prerequisite: departmental pre-registration; cumulative GPA of 2.5 or higher.

**IET 450 Mechanical Computer-Aided Engineering 3(2-2)**

Mechanical components design, structural analysis, and mechanism analysis by using computer aided design system and simulation tools. Prerequisites: IET 226, IET 350; IET 379 or EGR 255; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 451 Geometric Dimensioning and Tolerancing 3(2-2)**

Fundamentals of Geometric Dimensioning and Tolerancing concepts as interpreted in ASME standard Y14.5. This course may be offered in an online format. Prerequisite: IET 226; permission of E&T advisor.

**IET 452 Mechanical Laboratory 3(1-4)**

Experiments utilizing a variety of mechanical devices and systems to demonstrate fundamental concepts in mechanics, fluid mechanics, thermodynamics and heat transfer. Prerequisites: IET 351, IET 352, IET 356, IET 379; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 453 Heat Transfer 3(3-0)**

This course provides students with an introduction to concepts and methods of heat transfer. Topics include one-dimensional steady and transient conduction and heat exchanger design. Prerequisites: IET 352, 356; permission of E&T Advisor; cumulative GPA 2.5 or higher.

**IET 454 Machine Design 3(2-2)**

Theory and application of machine element fundamentals in design and analysis of mechanical systems for safe operation. Prerequisites: IET 350; IET 379 or EGR 255; permission of E&T advisor; cumulative GPA of 2.5 or higher.



**IET 455 Tool Design 3(2-2)**

Covers the process of planning and developing tools, fixtures, and devices for efficient and economical manufacture of a product. Prerequisites: IET 170, IET 226; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 458 Surface Modeling 3(2-2)**

Development and production of industrial and engineering designs with conceptual and parametric surface modeling tools. Utilization of curve and surface functions to interpret engineering designs. Prerequisites: IET 226, MTH 132; permission of E&T advisor; cumulative GPA of 2.5 or higher. Recommended: IET 324.

**IET 461 Construction Estimating and Scheduling 3(3-0)**

The techniques of quantity survey for material, labor, and equipment to enable the students to organize data essential for estimating cost and time duration of projects. Prerequisite: IET 361; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 462 Mechanical Systems in Buildings 3(3-0)**

Design, installation and performance of mechanical systems (heating, air conditioning, and plumbing) in buildings. Prerequisites: PHY 170, MTH 130, IET 361; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 466 Advanced Surface Modeling 3(2-2)**

Advanced surface modeling with a focus on the definition of freeform surfaces. Topics include freeform surface modeling, computer graphics, Bezier curves, B-splines, and NURBS. Prerequisites: EGR 200; IET 458; MTH 223 or MTH 232; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 472 Instrumentation and Controls 3(2-2)**

A study of instrumentation and control technology including sensor measurements, analog signal conditioning, programmable logic control, and closed-loop control fundamentals. Prerequisites: IET 352, 356, 375; permission of E&T advisor; cumulative GPA 2.5 or higher.

**IET 477 Advanced Computer Numerical Control Programming 3(2-2)**

Advanced CNC programming techniques including advanced GM codes, 3D surface machining, and multi-axis programming in CNC vertical milling center and turning center. Prerequisites: IET 226, 377; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 487 Vehicle Design and Manufacture 3(Spec)**

This course provides an opportunity for students to apply skills of engineering and design to development and design in a nationally competitive setting. Prerequisites: IET 170, 226; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 488 Computer Aided Product Design Capstone 3(1-4)**

Integration of design processes, techniques, systems, and technologies toward the solving of a product design problem. Prerequisite: IET 324; cumulative GPA of 2.5 or higher. Pre/Co-requisites: IET 458 and Senior Standing.

**IET 497 Special Studies 1-6(Spec)**

Individual investigation and research to increase ones technical competency. Prerequisite: Cumulative GPA of 2.5 or higher.

**IET 499 Industrial Projects Capstone 3(Spec)**

The integration of appropriate methods, procedures, and techniques for the analysis of industrial projects and implementation of solutions via a team approach. Labs to be arranged. Prerequisites: IET 450, 454 with a signed Mechanical Engineering Technology Major or IET 324, 458 with a signed Product Design Engineering Technology Major or IET 377, 500 with a signed Industrial Engineering Technology Major.

**IET 500 Production Concepts 3(3-0)**

Comprehensive review of current factors that influence productivity. Emphasis is placed on the integration of people, methods, machines, materials, and management. This course may be offered in an online or hybrid format. Prerequisites: IET 327; STA 282; permission of E&T advisor; cumulative GPA of 2.5 or higher; or graduate standing.

**IET 501 Application of Industrial Management Principles 3(3-0)**

A study of industrial management as a process of coordination that exhibits different patterns depending on the manager's level in the organization and functional responsibilities. This course may be offered in an online or hybrid format. Prerequisites: STA 282; cumulative GPA of 2.5 or higher; or graduate standing and statistics competency; permission of E&T advisor.

**IET 502 Computer Applications in Industry 3(3-0)**

General/special purpose, digital/analog computer applications in industry and automation with emphasis on input/output devices and process control. Prerequisite: 12 IET credit hours; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 524 Technology and Environment 3(3-0)**

A study of the relationship between technology and environment. A systems approach is utilized to examine the optimization of technology within environmental constraints. This course may be offered in an online or hybrid format. Prerequisite: 12 IET credit hours; cumulative GPA of 2.5 or higher; or graduate standing; permission of E&T advisor.

**IET 526 Industrial Ergonomics 3(2-2)**

The study of human characteristics, capacities and limitations for the design of productive, safe, and comfortable work spaces, tools, equipment, tasks, and facilities. Prerequisites: IET 327; cumulative GPA of 2.5 or higher; or senior/graduate standing and permission of instructor; permission of E&T advisor.

**IET 527 Industrial Safety Management 3(3-0)**

A comprehensive study of safety management systems and their implication related to accident cost analysis and to programs which comply with state and federal standards. Prerequisite: IET 327; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 532 Careers and Technology for Children 3(2-2)**

Developing interdisciplinary instructional units, manipulatives, and pedagogy to provide K-12 students with meaningful career awareness, exploration, and preparation experiences utilizing industrial materials, tools, and processes. Prerequisite: junior, senior or graduate status in teacher education; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 534 Design and Construction of Teaching Aids 2(1-2)**

Workshop for planning and constructing three-dimensional teaching aids and devices in various curriculum areas of the elementary and secondary grades. Prerequisite: senior status; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 550 Product Design and Development 3(3-0)**

Product design principles, structural, aesthetic, and intellectual property considerations, and product function are discussed. Focus on concept development, evaluation, and prototyping. Prerequisites: IET 226; cumulative GPA of 2.5 or higher; or Graduate Standing; permission of E&T advisor.

**IET 561 Light Frame Construction Workshop 3(0-6)**

A workshop on estimating, scheduling, building codes, and construction techniques for frame buildings. Prerequisites: permission of E&T advisor; cumulative GPA of 2.5 or higher. Recommended: IET 361.

**IET 567 Construction Safety 3(3-0)**

A comprehensive study of construction safety standards, practices, and procedures. Prerequisites: permission of E&T advisor; cumulative GPA of 2.5 or higher. Recommended: IET 361.

**IET 576 Industrial Automation 3(2-2)**

A study of electro mechanical devices, industrial robotics, programmable logic controllers (PLCs), and automated work cell designs. Prerequisites: IET 375; MTH 132; CPS 150 or CPS 180; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 590 Green Building and Sustainability 3(3-0)**

Comprehensive study of the principles of Green Building and Sustainability. Topics include sustainability, xeriscaping, high performance building, energy efficiency, indoor air quality and environmental stewardship. This course is approved for offering in a distance learning format. Prerequisites: IET 361, 368; cumulative GPA of 2.5 or higher; or graduate standing; permission of E&T advisor.

**IET 591 Construction Management 3(3-0)**

A comprehensive study of construction management standards, practices, and procedures with emphasis on the legal aspects of the private, federal, and state construction industries. Prerequisites: IET 361, IET 561; permission of E&T advisor; cumulative GPA of 2.5 or higher.

**IET 597 Special Studies 1-6(Spec)**

Prerequisite: Cumulative GPA of 2.5 or higher.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**IET 602 Current Concepts of Industrial Education 2(2-0)****IET 610 Advanced Quality Management 3(3-0)****IET 619 Continuing Registration for Final Research Project 1(1-0)****IET 620 Advanced Materials 3(2-2)****IET 625 Industrial Internship 2-6(Spec)****IET 633 Seminar: Industrial Education 3(3-0)****IET 634 Advanced Safety Management 3(3-0)****IET 635 Curriculum Development: Industrial Education 3(3-0)****IET 636 Leadership Internship 2-6(Spec)****IET 650 Project Management 3(3-0)****IET 670 Lean Manufacturing & Six Sigma Quality 3(3-0)****IET 680 Sustainability and Green Technology 3(3-0)****IET 694 Problems in Management and Technology 1-6(Spec)****IET 695 Independent Study 2-6(Spec)****IET 697 Special Studies 1-6(Spec)****IET 733 Practicum: Industrial Education/Special Education 3(Spec)****IET 791 Independent Research 2-6(Spec)****IET 798 Thesis 1-6(Spec)**

## IGR - Intergroup Relations and Justice

*Contact the College of Liberal Arts and Social Sciences for more information.*

**IGR 145 Racism and Racial Justice through Dialogue 3(3-0)**

*Interdisciplinary course that examines (through lecture and dialogue) historical and economic causes of racism and ways of achieving a just society. Identical to CGL 145. Credit may not be earned in more than one of these courses. (University Program IV-C: Studies in Racism and Cultural Diversity in the United States)*

**IGR 245 Gender Identities in Dialogue 3(3-0)**

Through small-group dialogues with peers, students will critically explore the role of gender in shaping identity, relationships, and social institutions. Identical to WGS 245. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)

**IGR 365 Cultural and Global Studies Internship 1-3(Spec)**

Internship experience within or outside of the United States to complement the Cultural and Global Studies Major, Minor or Certificate being completed. Identical to CGL 302. Credit may not be earned in more than one of these courses. Prerequisites: Signed CGL Major, CGL Minor, or CGL certificate; 3 hours of curriculum completed; permission of a CGL faculty advisor.

**IGR 445 Training in Intergroup Dialogue Facilitation 3(3-0)**

This course gives students a foundation in the skills and knowledge needed to facilitate dialogue in small diverse groups on topics related to discrimination. Identical to CGL 445. Credit may not be earned in more than one of these courses. Prerequisites: IGR 145 or CGL 145.

**IND - Interior Design**

See the Department of Fashion, Interior Design, and Merchandising for more information.

**IND 109 Architectural Drafting 3(2-2)**

Architectural drafting conventions and introductory CAD skills required by the interior design profession focused on 2-dimensional drawings. Students are required to receive a C or better in this course.

**IND 131 Interior Design Studio I: Introduction 3(1-4)**

Introduction to the design process through design theory, concepts, materials, model building techniques and space planning for commercial and residential interiors. Prerequisites: IND 109 with a C or better; IND 132 with a C or better or ART 106. Pre/Co-requisites: IND 138 with a C or better; ART 119 or ART 202; or signed Interior Design minor.

**IND 132 Drawing for Interiors 3(2-2)**

Introduction to interior design drawing techniques focused on technical perspective drawing, and professional communication. Students are required to receive a C or better in this course.

**IND 134 Digital Fundamentals for Interior Design 3(1-3)**

Introduction to elements and principles of two-dimensional visual communication. Emphasis is on creative problem solving and technical fundamentals as they apply to interior design. This course may be offered in an online format.

**IND 138 Visual Communication for Interior Design 3(2-2)**

Visual communication of design concepts through manual rendering and presentation techniques; used to express development and the final stages of design process. Prerequisite: IND 132 with a C or better or signed Interior Design minor; Pre/Co-requisite: IND 109 with a C or better.

**IND 155 Introduction to Textiles 3(2-2)**

Introductory textiles course. Study of fiber, yarn, and fabric properties intended for interior usage; impact of various processes on use and serviceability; includes laboratory analysis. Students are required to receive a C or better in this course. Credit may not be earned in both FMD 155 and IND 155.

**IND 234 Computer Modeling 3(2-2)**

Fundamental concepts and applications of 3-dimensional modeling and rendering software used in interior design visual presentations. Prerequisites: IND 131 with a C or better, IND 138 with a C or better; Pre/Co-Requisites: IND 326 with a C or better, IND 337 with a C or better.

**IND 238 Design History and Precedent 3(3-0)**

Cross-cultural survey of environmental design (From Ancient Cultures through 17th Century Design) including furniture, interiors, and architecture with correlating historical context. Interior design students are required to receive a C or better in this course. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

**IND 326 Building Systems 3(2-2)**

Investigation of building systems, their related codes, and construction with an emphasis on interior design applications using CAD technologies. Prerequisite: IND 131 with a C or better; Pre/Co-requisite: IND 337 with a C or better.

**IND 328 Design History and Criticism 3(3-0)**

Study of Western design forms (17th century through present) with correlating historical, cultural, and theoretical developments. Criticism of current design using diverse criteria. Students are required to receive a C or better in this course. Prerequisite: IND 238, with a C or better for Interior Design majors or minors.

**IND 331 The Art of Event Planning 3(3-0)**

Through the principles and elements of design, this course provides the application of design skills to the overall design of an event while recognizing budget and client constraints. Prerequisites: A minimum of 24 hours completed.

**IND 332WI Human Shelter and Environment 3(3-0)**

Course explores the interrelationship between the built, cultural and natural environments and human behavior, perception and social interaction. Writing Intensive. (University Program Group III-A: Behavioral Sciences)

**IND 333 Interior Design Service Learning 1-6(Spec)**

This course offers an opportunity for Interior Design students to perform targeted academic-based service work under the supervision of a CMU faculty member. Students are required to receive a C or better in this course. Prerequisite: IND 131.

**IND 335 Contract Documents 3(2-2)**

This course provides in-depth application of the methods, materials and processes of creating a set of construction drawings and specifications using CAD software. Prerequisite: IND 326 with a C or better.

**IND 336 Materials and Components of Interior Design 3(3-0)**

Consideration of the materials, equipment and systems utilized in the design and construction of interior environments. Pre/Co-requisite: IND 155 with a C or better.

**IND 337 Interior Design Studio II: Residential 3(1-4)**

Application of basic design process to residential interiors: space planning, furnishings, finishes and color; according to the socioeconomic, physical and psychological needs of users. Prerequisite: IND 131 with a C or better; Pre/Co-requisites: IND 234 with a C or better, IND 326 with a C or better.

**IND 338 Professional Preparation for Interior Design 1(0-2)**

Development of portfolio and job-seeking skills used for obtaining an internship/entry level position within an interior design firm or related field. Should be taken by majors in the semester prior to IND 438. Pre/Co-requisite: IND 337 with a C or better.

**IND 339WI Interior Design Studio III: Special User Groups 3(1-4)**

Assessment of the special environmental needs of people with disabilities, elderly and children; application to studio design problems. Writing Intensive. Prerequisite: IND 337 with a C or better; Pre/Co-requisite: IND 328 with a C or better.

**IND 397 Special Topics in Interior Design 1-6(Spec)**

Topics of special interest, which are not normally included in existing courses. This course may be offered in an online format. Students are required to receive a C or better in this course. Prerequisites: See Course Search and Registration

**IND 432WI Seminar in Interior Design 3(3-0)**

Capstone course providing focus on current issues in interior design and portfolio evaluations. Must be taken during the final Spring semester before graduation. Writing Intensive. Prerequisite: IND 339WI with a C or better; Pre/Co-requisite: ART 285.

**IND 433 Professional Practices in Interior Design 3(3-0)**

Application of internships and business procedures to the establishment and day-to-day operations of a design practice. Prerequisite: IND 438 with a C or better.

**IND 434 Advanced CAD for Interiors 3(2-2)**

Advanced application of CAD software. Emphasis on application of the computer as a design tool, topical applications and computer graphic methods. Prerequisites: IND 337 with a C or better; Pre/Co-requisites: IND 339WI with a C or better, IND 436 with a C or better.

**IND 436QR Lighting Design 3(2-2)**

The theory, strategies and technical application of lighting systems for human activity. Focused on light quality and quantity through calculations, lighting plans and specifications. Quantitative Reasoning. Prerequisites: IND 337 with a C or better; successful completion of math competency.

**IND 437 Interior Design Studio IV: Hospitality & Retail Design 3(1-4)**

Application of visual, conceptual and functional design processes for commercial hospitality and retail interior environments. Prerequisite: IND 339WI with a C or better; Pre/Co-requisite: IND 335 with a C or better.

**IND 438 Interior Design Internship 2(Spec)**

Supervised internship of 10 week/250-hour minimum in interior design, or a related industry, to complement classroom learning. Expectation for experience is at a single firm. Taken semester prior to IND 433. Prerequisite: IND 339WI with a C or better.

**IND 439 Interior Design Studio V: Senior Project 3(1-4)**

A capstone studio course focusing on mixed-use commercial interior projects with increasing scope and complexity, integrating current trends. Prerequisites: IND 339WI with a C or better; Pre/Co-requisites: IND 335 with a C or better, IND 436 with a C or better.

**IND 490 Independent Study in Interior Design 1-6(Spec)**

A student-initiated learning activity focusing on a faculty approved topic in Interior Design. Students are required to receive a C or better in this course. Prerequisite: Permission of instructor.

**IND 497 Special Topics in Interior Design 1-15(Spec)**

Topics of special interest, which are not normally included in existing courses. Students are required to receive a C or better in this course. Prerequisites: See Course Search and Registration.

**IPR - Integrative Public Relations**

See the Integrative Public Relations Major for more information.

**IPR 101 Foundations of Integrative Public Relations 1(1-0)**

Introduction to the concepts, activities, responsibilities and career directions of public relations from an interdisciplinary perspective.

**IPR 490 Independent Study in Integrative Public Relations 1-6(Spec)**

Student-initiated study guided by faculty member or faculty committee. Prerequisite: Students enrolling in IPR 490 must be a signed IPR major.

**IPR 555 Public Relations Internship 6(Spec)**

Directed full-time work experience in a professional public relations environment. Prerequisites: IPR 101; BCA 311WI; COM 264 or COM 365; JRN 202WI, JRN 302, JRN 350, JRN 369, JRN 450WI; completion of 86 credit hours; prior written approval of the designated internship coordinator; signed Integrative Public Relations major or graduate status.

**IPS - International Program Studies**

*Contact the Office of Global Engagement for more information.*

**IPS 197 International Program Studies 1-36(Spec)**

Courses taken abroad under auspices of Central Michigan University. Primarily for freshmen and sophomores. Prerequisite: permission of the Director of Study Abroad.

**IPS 297 International Program Studies 1-36(Spec)**

Courses taken abroad under auspices of Central Michigan University. Primarily for freshmen and sophomores. Prerequisite: permission of the Director of Study Abroad.

**IPS 397 International Program Studies 1-36(Spec)**

Courses taken abroad under auspices of Central Michigan University. Primarily for juniors and seniors. Prerequisite: permission of the Director of Study Abroad.

**IPS 497 International Program Studies 1-36(Spec)**

Courses taken abroad under auspices of Central Michigan University. Primarily for juniors and seniors. Prerequisite: Permission of the Director of Study Abroad.

**IPS 597 International Program Studies 1-36(Spec)**

Courses taken abroad under auspices of Central Michigan University. Primarily for seniors and graduate students. Prerequisite: permission of the Director of Study Abroad.

**ITC - Information Technology**

*See the Department of Computer Science for more information.*

**ITC 190 Computer Hardware Concepts, Installation, Configuration, and Support 3(3-0)**

Basic computer organization, overview of computer components, properties of peripheral devices, processes management, physical and virtual memory management techniques, resource allocation and protection. Recommended: take concurrently with ITC 191.

**ITC 191 Computer Software Concepts, Installation, Configuration, and Support 3(3-0)**

User view of system resources, file systems and operations, start-up, configuration files, software installation, dependencies, deinstallation, simple scripts, batch files, and account management basics. Recommended: Take concurrently with ITC 190.

**ITC 265 Basics of Data Communications and Computer Networks 3(3-0)**

Concepts of data communications and networks with Internet focus. Introduction and examination of principles and protocol mechanisms with application to practical contexts. Prerequisites: CPS 181 or CPS 191 or ITC 191.

**ITC 292 Introduction to System Administration 3(3-0)**

Concepts and skills related to the configuration and administration of real and virtualized systems: system, library, and application installation, configuration and maintenance; user management; system and data security. Prerequisites: CPS 180 or CPS 190; ITC 191.

**ITC 320 Web Application Development - Client-Side Scripting 3(3-0)**

Creating web-based applications with a focus on graphical user interfaces, event driven, object-oriented programming and dynamic, animated web pages. Prerequisite: CPS 181. Recommended: CPS 165.

**ITC 330 Information Storage and Management 3(3-0)**

Information storage and management techniques for storing, managing, and protecting digital information in classic, virtualized, and cloud environments. Prerequisites: ITC 190, ITC 191. Recommended: ITC 265.

**ITC 333 Cybersecurity 3(3-0)**

Introduction of cybersecurity fundamentals, principles of security and information assurance, mechanisms and tools, and compliance requirements. Prerequisites: ITC 265; Pre/Co-requisites: CPS 301.

**ITC 341 Introduction to Databases and Applications 3(3-0)**

Database concepts, data models, relational databases, query language SQL, simple database programming. Design and develop databases for various applications using database management systems. Prerequisite: CPS 181 or CPS 191 or CPS 285.

**ITC 383 Computer Game Design 3(3-0)**

Introduction to design and development of computer video games. Hands-on creation and testing of games. Prerequisite: CPS 382.

**ITC 392 Information Technology Administration 3(3-0)**

Information technology system requirements, acquisition, deployment, operation, and performance analysis. Prerequisites: COM 264 or COM 361; CPS 301; ITC 265; MTH 132 or MTH 217 or MTH 175; STA 282QR or STA 382QR.

**ITC 441 Database and Virtual Data Server Administration 3(3-0)**

Administration of database management systems, including configuration of users, security, data recovery and performance. Management of virtual machines and hosting for database management systems. Prerequisite: ITC 341. Recommended: ITC 292.

**ITC 465 Network Administration and Security 3(3-0)**

Design and administration of heterogeneous network systems and components. Secure configuration of essential network services. Prerequisite: ITC 265.

**ITC 466 System Administration and Automation 3(3-0)**

Applications of theory, concepts, tools and procedures around major functional areas (configuration, performance, accounting, fault and security) of network management and system administration. Prerequisite: ITC 465.

**ITC 495 Senior Internship 1-9(Spec)**

Supervised work experience in Information Technology. Up to 3 hours may count toward the major. Any additional hours must provide a significantly different educational experience. CR/NC only. Prerequisites: Senior Standing; permission of department chairperson.

**ITC 496 Special Topics in Information Technology 1-6(Spec)**

Study of selected information technology topics presented at an advanced level and not included in a regular course. Repeatable up to 6 credits when content previously studied is not duplicated. Pre/Co-requisites: See Course Search and Registration. Determined by the specific topics presented.

**ITC 498 Senior Design I in IT 3(2-2)**

Senior design course for ITC programs. This course integrates design methods and software engineering techniques in the context of a realistic information processing system-based project. Prerequisites: Senior standing; declared ITC major or completing the Mobile Computing certificate; pass all required 300 level courses in major or all required certificate prerequisites.

**ITC 510 Software and Data Modeling 3(3-0)**

Fundamentals of systems analysis, including the essential concepts and major paradigms of software and data modeling. Methods and techniques for software and data modeling. Prerequisite: DAS 350 or CPS 410 or admitted to the Master of Science in Computer Science program or admitted to the Master of Science in Applied Statistics and Analytics program.

**ITC 520 Foundations of Computer Security 3(3-0)**

Computer and network security, cryptography, encryption, threat models, protocols and algorithms, confidentiality, integrity, authentication, authority, access control, operating system and software security, malware, intrusion detection. Prerequisites: ITC 465 or graduate standing.

**ITC 530 Mobile Computing 3(3-0)**

Applications and services using distributed and containerized computation, networking, and storage from mobile devices to the cloud. Prerequisites: CPS 180 or CPS 190; CPS 294, CPS 340, or ITC 292; or admitted to the Master of Science in Computer Science program.

**ITC 531 Cloud Application Development 3(3-0)**

Containerized and cloud services based application development. Amalgamation of cloud services. Course does not count toward a major in CPS or Cybersecurity. Prerequisite: ITC 292 or ITC 341; or graduate standing.

**ITC 532 Cloud Service Orchestration 3(3-0)**

Containerized and cloud-based service orchestration and management using standard frameworks. Integration of multiple cloud providers. Course does not count toward a major in CPS or Cybersecurity. Prerequisite: ITC 531.

**ITC 533 Applied Artificial Intelligence for Internet of Things 3(3-0)**

Application of artificial intelligence to IoT data, including data ingestion and distributed processing. Use of AI tools. Course does not count towards a major in CPS or ITC or the MS in CPS. Prerequisites: CPS 280 or CPS 340; STA 282QR or STA 382QR; or graduate standing

**ITC 534 Introduction to Cloud Computing 3(3-0)**

An introduction to the architecture and algorithms used in cloud computing services, such as distributed computing, virtualization, storage, security and cloud software tools. Prerequisite: ITC 510.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**ITC 620 Information Security and Privacy 3(3-0)****ITC 630 Cloud Computing 3(3-0)****ITC 686 Big Data Analytics 3(3-0)****ITC 691 Information Technology Project 3(3-0)****JPN - Japanese**

*See the Department of History, World Languages, and Cultures for more information.*

**JPN 101 Elementary Japanese I 4(4-0)**

*Designed for students who have had no Japanese. Basic language skills. Introduction to the culture of Japan. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**JPN 102 Elementary Japanese II 4(4-0)**

*Basic language skills and culture. Continuation of JPN 101. Recommended: JPN 101. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*



**JPN 110 Study Abroad 1-8(Spec)**

Intended for beginning students studying abroad. Prerequisite: permission of department chairperson.

**JPN 201 Intermediate Japanese I 4(4-0)**

Further development of all language and reading skills; a review of grammar, and exploration of Japanese culture. Recommended: JPN 102. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**JPN 202 Intermediate Japanese II 4(4-0)**

Designed to further develop fluency in Japanese; cultural emphasis. Recommended: JPN 201. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**JPN 210 Study Abroad 1-12(Spec)**

Intended for intermediate students studying abroad. Prerequisites: JPN 102; permission of department chairperson.

**JPN 310 Study Abroad 1-12(Spec)**

Intended for advanced-level students studying abroad. Prerequisite: Permission of instructor.

**JPN 410 Study Abroad 1-12(Spec)**

Intended for advanced-level students studying abroad. Prerequisite: Permission of instructor.

## JRN - Journalism

See the Department of Journalism for more information.

**JRN 101 Media and Society 3(3-0)**

Understanding the influence of media and society. (University Program Group III-B: Studies in Social Structures)

**JRN 102 Introduction to Journalism 3(3-0)**

An introduction to journalism as a social, cultural, political, technological, and economic force; a professional field; an academic discipline, unit and program.

**JRN 105 Social Media in Society 3(3-0)**

The development and impact of social media on society, message control, and the goals and objectives in communication with audiences. (University Program Group III-B: Studies in Social Structures)

**JRN 107WI Literary Journalism 3(3-0)**

An in-depth exploration of first-person story-telling and its influence on revealing the silent human experience. Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**JRN 197 Special Studies 1-3(Spec)**

Appropriate title to be listed when offered.

**JRN 202WI Writing for the Mass Media 3(3-0)**

Gathering, processing and writing information and opinion on current matters using professional standards and formats in news, public relations and advertising. Writing Intensive. Prerequisites: ENG 101 (C or better) or ENG 103/109 (C or better) or ELI 198 (C or better) or ENG 201 (C or better).

**JRN 203QR Information Gathering for the Mass Media 3(3-0)**

Acquiring, comprehending, analyzing, synthesizing, and evaluating information by solving journalistic problems in a variety of cases and from multiple perspectives. Pre/Co-Requisite: JRN 202. Quantitative Reasoning.

**JRN 205WI Shaping the Media 3(3-0)**

An in-depth exploration of the news environment and the forces that shape news within the context of civic and global citizenship. Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**JRN 207 Video Games and Mass Communication 3(3-0)**

Examines video games as a mass medium, analyzes their social and cultural impact and explores current video game trends, including their uses by mass media industries. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

**JRN 220 Basic Media Photography 3(3-0)**

Camera operation, producing and processing of photographs for media use.

**JRN 250 Social Media: Managing the Message 3(3-0)**

Select, use and analyze social media to build relationships, network, distribute messages and develop strategies for organizations. Prerequisite: JRN 105 with a C or better.

**JRN 297 Special Studies 1-6(Spec)**

Appropriate title to be listed when offered.

**JRN 302 Introduction to Graphics and Visual Communication 3(3-0)**

Principles and techniques of publication/advertising graphics and visual communication, including typography and the printing process.

**JRN 305 Hackers: The History of Media Innovation 3(3-0)**

Examines people's adoption of media technologies by focusing on how journalism, advertising, public relations and the public have historically assisted and/or hindered diffusion. (University Program Group III-A: Behavioral Sciences)

**JRN 312WI Reporting 3(3-0)**

Skills in gathering, evaluating and writing news. Writing Intensive. Prerequisites: JRN 202, 203; ENG 201.

**JRN 315 Editing 3(3-0)**

Copy editing, headline writing and design and layout. Prerequisite: JRN 202.

**JRN 320 Photo Editing 3(3-0)**

Use and preparation of photographs for the print media. Prerequisite: JRN 220.

**JRN 339 Social Media: Reputation, Image and Interaction 3(3-0)**

Advanced skills in using social media to engage audiences, establish professional brands, drive traffic and evaluate results. Prerequisite: JRN 202.

**JRN 340 Introduction to Digital Journalism 3(3-0)**

Survey of current theories, issues and trends of the digital journalism environment, and introduction of digital journalism production using current media tools and software. Prerequisites: JRN 202 with a C or better or JRN 361 with a C or better.

**JRN 348WI Business Journalism 3(3-0)**

Coverage of business, economic, consumer and personal finance issues. Writing Intensive.

**JRN 350 Public Relations Principles and Practices 3(3-0)**

Concepts and principles of public relations practiced by corporations, agencies, non-profits and other organizations. Role of the practitioner stressed.

**JRN 353 Foundations of Strategic Public Relations 3(3-0)**

Overview of strategic campaign process and application public relations theory to real-world projects including formative research, strategic and tactical planning, and plan evaluation phases.

**JRN 360 Advertising Principles 3(3-0)**

Organization of today's advertising industry; role of advertising in promotion; examination of types of advertising and media vehicles.

**JRN 361 Writing for Advertising 3(3-0)**

An introduction to the principles and techniques used in writing for print, broadcast, internet, mobile, direct mail, and point-of-sale advertising. Prerequisite: JRN 360.

**JRN 365 Advertising Media 3(3-0)**

Focuses on planning and selection of advertising media emphasizing the theories and skills necessary to place advertising messages in the media. Prerequisite: JRN 360.

**JRN 366 Advertising Account Management 3(3-0)**

An exploration of the history, functions, and skills of advertising account management. Prerequisite: JRN 360.

**JRN 369 Advertising and Public Relations Research 3(3-0)**

Reviews and applies secondary, social scientific, professional, and interpretative research methods in persuasive mass communication contexts. Prerequisite: JRN 350 or 353 or 360.

**JRN 370 Social Media Legal and Ethical Issues 3(3-0)**

Students investigate and analyze legal and ethical issues in social media to develop appropriate standards and policies for an organization. This course is offered in an online format only. Prerequisite: JRN 250 with a C or better.

**JRN 372 The Asian Media and Cross-cultural Mass Communication 3(3-0)**

Analysis of Asian media systems and historical, economic, political and cultural factors shaping those systems. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**JRN 375 Digital and Social Media Analytics 3(3-0)**

This course covers data-mining and data visualization techniques for organizational decision making by focusing on analytics: tracking, analyzing, and synthesizing real-time social media. Prerequisite: 30 hours of university credit.

**JRN 380 Racial and Cultural Diversity: Mass Media's Role 3(3-0)**

Critical, historical and contemporary examination of African, Hispanic, Asian, Native American, and gender stereotypes in mass media. Self-portrayals by these groups using mass media. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**JRN 397 Special Studies 1-6(Spec)**

Appropriate title to be listed when offered.

**JRN 402 Advanced Media Graphics and Visual Communication 3(3-0)**

Advanced techniques of multimedia graphics, digital publishing, and visual design for media industries including advertising, journalism and public relations. Prerequisite: JRN 302.

**JRN 404 Law of Mass Communication 3(3-0)**

Principles and case studies of mass communication law. Prerequisites: JRN 101 or JRN 102 or JRN 105; junior standing.

**JRN 409 Independent Study 1-3(Spec)**

Individual study under faculty direction. Prerequisite: senior standing.

**JRN 417WI Sports Reporting 3(3-0)**

Critical examination and reporting of sports events. Writing Intensive. Prerequisite: JRN 202.

**JRN 420 Photography Studio Techniques 3(3-0)**

Use of camera in a controlled environment, studio lighting and basic studio operation. Prerequisite: JRN 220.

**JRN 421 Color News Photography 3(3-0)**

Use and production of color transparencies, prints; basic considerations of media use. Prerequisites: JRN 220, JRN 320.



**JRN 422 The Picture Story 3(3-0)**

Extensive use of the multiple-picture project to develop skills in visual storytelling, caption writing, and ethics. Digital SLR camera and external hard drive required. Prerequisites: JRN 220, 320.

**JRN 423 Online Visual Storytelling 3(3-0)**

Online storytelling for the photojournalist. Multimedia production combining still photography, audio, and video with the intended purpose of publishing on the Web. Prerequisites: JRN 202; 56 credits completed.

**JRN 430WI Magazine and Feature Writing 3(3-0)**

Experience in writing and marketing newspaper features and magazine articles. Submission of manuscripts for publication is required of each student in the course. Writing Intensive. Prerequisites: JRN 202, 203.

**JRN 440 Advanced Digital Journalism 3(3-0)**

Advanced techniques of digital journalism production using current media tools and software. Prerequisites: JRN 202, 340 with a C or better in each course. Recommended: JRN 203, 220.

**JRN 441 Data Journalism 3(3-0)**

An introduction to data journalism that involves the investigating and reporting of news by prospecting for, analyzing, graphing, and mapping data from online databases. Prerequisites: JRN 202, 203.

**JRN 445 Multimedia Reporting Capstone 3(3-0)**

Advanced principles and techniques of online multimedia news and feature packages including writing and reporting, text, photos, interactive graphics, audio, video, other forms of multimedia. Prerequisites: JRN 340, JRN 312WI for journalism majors; JRN 340, JRN 423 for photojournalism majors.

**JRN 448 Journalism Practicum 1-3(Spec)**

Applying various online journalism theory and skills, such as web design, audio and video production, and photography to publish a web magazine as a group. Prerequisite: JRN 202.

**JRN 449 Journalism Internship 3(Spec)**

Experience in online journalism under professional and faculty supervision. May be applied toward journalism major and minor only with permission of faculty advisor. Prerequisites: Junior standing; prior approval of internship director.

**JRN 450WI Public Relations Writing 3(3-0)**

Creating and editing written materials for a variety of public relations purposes and a variety of media. Writing Intensive. Prerequisites: JRN 202; JRN 350 or 353.

**JRN 460 Social Media Practicum, Portfolio and Plan 3(3-0)**

A supervised, eight-week practicum for integrating social media into an organization's communications. This course is offered in an online format only. Prerequisites: JRN 370 with a C or better. Written authorization (CMU approved forms) is required from the faculty advisor and on-site practicum supervisor prior to the start of the course.

**JRN 465 Advertising Copy and Design 3(3-0)**

Techniques used to evaluate, execute, and synthesize advertising concepts and strategies, and digital content creation. Students will create advertising copy, designs, layouts, and presentations. Prerequisites: JRN 302, JRN 360, JRN 361.

**JRN 466 Advertising Campaigns 3(3-0)**

Development of advertising plans. Choice of appeals, approaches, media, and creative strategies. Preparation, production and presentation of campaigns. Budget allocation, marketing research, assessment and evaluation. Prerequisites: JRN 361; JRN 365 or MKT 315.

**JRN 467 Advertising Account Planning 3(3-0)**

This course will explain, explore, demonstrate, and examine the research techniques and interpretive skills used in the field of marketing-communications. Prerequisite: JRN 360.

**JRN 497 Special Studies 1-6(Spec)**

Appropriate title to be listed when offered.

**JRN 500 Current Issues in Mass Communication 3(3-0)**

Examination of the role of mass communication in society through the exploration of issues, ethics, trends and decision-making processes. Prerequisite: senior standing.

**JRN 516WI Public Affairs Reporting 3(3-0)**

Coverage of government and other public issues. Writing Intensive. Prerequisite: JRN 203, 312.

**JRN 519 Journalism Internship 1-4(Spec)**

Experience at news organizations under professional and faculty supervision. May be applied toward journalism major and minor only with permission of faculty advisor. Prerequisites: junior standing; permission of instructor.

**JRN 520 Independent Study in Photography 3(3-0)**

Advanced experience and individual instruction in photography. Prerequisites: JRN 220, JRN 320.

**JRN 521 Seminar in News Photography 3(3-0)**

Field experience of the photograph as a means of communicating information, ideas and opinions.

**JRN 529 Photojournalism Internship 1-4(Spec)**

Photojournalism experience under professional and faculty supervision. May be applied to journalism major or minor only with permission of faculty advisor. Prerequisites: junior standing; permission of instructor.

**JRN 551WI Case Studies in Public Relations 3(3-0)**

Examination of historic and contemporary public relations problems and programs with emphasis on research, planning and problem solving skills in public relations practices. Writing Intensive. Prerequisites: JRN 350 or 353; JRN 369; JRN 450.

**JRN 556 Public Relations Seminar 3(3-0)**

Practical applications of public relations principles in a diverse society. Prerequisites: JRN 350 or 353; 450; 551.

**JRN 559 Public Relations Internship 1-4(Spec)**

Experience in public relations under professional and faculty supervision. May be applied toward journalism major and minor only with permission of faculty advisor. Prerequisites: junior standing; permission of instructor.

**JRN 569 Advertising Internship 1-4(Spec)**

Experience in advertising under professional and faculty supervision. May be applied toward journalism major or minor only with permission of faculty advisor. Prerequisites: junior standing and permission of instructor.

**JRN 597 Special Studies 1-6(Spec)**

Appropriate title to be listed when offered.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**JRN 670 Public Relations Management 3(3-0)**

## LAR - Liberal Arts

*See the College of Liberal Arts and Social Sciences for more information.*

**LAR 113 Public Service in the Liberal Arts and Social Sciences 3(3-0)**

This interdisciplinary course explores topics around leadership and public service within the liberal arts and social sciences through activities and dialogue. Recommended: Admission to the CLASS Public Service Residential College (PSRC).

**LAR 197 Special Studies in Liberal Arts 1-12(Spec)**

Primarily for freshmen or sophomores. Prerequisite: permission of instructor.

**LAR 397 Special Studies in Liberal Arts 1-12(Spec)**

Consideration of subjects in the liberal arts not listed in regular departmental or program offerings. This course may be offered in an online format. Prerequisite: ENG 201 with a grade of C or better.

**LAR 597 Special Studies in Liberal Arts 1-12(Spec)**

Primarily for graduate students. Prerequisite: permission of instructor.

## LAT - Latin

*See the Department of History, World Languages, and Cultures for more information.*

**LAT 101 Elementary Latin I 4(4-0)**

*Introduction to Latin through the study of grammar, vocabulary, and readings in Roman history, literature, and culture. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**LAT 102 Elementary Latin II 4(4-0)**

Continuation of LAT 101. Prerequisite: LAT 101.

**LAT 201 Intermediate Latin I 4(4-0)**

Translating typical classical Latin prose. Prerequisite: LAT 102.

**LAT 202 Intermediate Latin II 4(4-0)**

Continuation of LAT 201. Prerequisite: LAT 201.

## LDR - Leadership Studies

*See the Leadership Minor or the Leadership Institute (see index for page number) for more information.*

**LDR 100 Introduction to Leadership Education and Development 1(1-0)**

Designed to provide students with the foundation to develop and enhance their leadership potential and expose them to opportunities in the university environment in order for them to fulfill their scholarship protocol. CR/NC only. Prerequisites: Only open to Leader Advancement Scholarship (LAS) recipients.

**LDR 110 Personal Leadership & Service 1(1-1)**

An exploratory course guiding students in discovering their personal & leadership potential and exposure to the university and local community with emphasis on public service.

**LDR 120 Introduction to Service Leadership 1(1-1)**

The use of service leadership as a means of impacting issue-based social problems.

**LDR 200 Introduction to Leadership 3(2-2)**

Introduction to theoretical, philosophical, and conceptual foundations of leadership. Emphasis on styles and approaches to leadership related to the humanities, natural sciences, and social sciences. This course may be offered in an online format.

**LDR 302 Field Experience in Leadership 3(Spec)**

The application of leadership theories, skills and practices within a supervised organizational setting involving work, volunteer/community service, or project management. Course may be offered in an online format. Prerequisites: LDR 200, 45 credit hours completed and a signed leadership minor.

**LDR 320 Leadership and Service in Nonprofits 3(3-0)**

Students will experience and apply leadership models specific to nonprofits. This course will emphasize social change leadership and service-based projects. This course may be offered in an online or hybrid delivery format. Prerequisite: LDR 200.

**LDR 499 Contemporary Issues in Leadership 3(3-0)**

An integrative capstone course designed to synthesize theory, skills, and applications of leadership. Students will explore personal values, ethical decision-making, and organizational functions of leadership. This course may be offered in an online format. Prerequisites: LDR 302, COM 461, signed leadership minor.

**LIB - Library**

Contact Library Research and Instruction Services in Park Library for more information.

**LIB 197 Introduction to Library and Information Research 1(1-0)**

Skills needed to conduct library research: using library resources, defining topics, and evaluating and citing sources.

**LIB 397 Special Topics in Library and Information Research 1-3(Spec)**

Students will learn in-depth library and information research skills within specialized or discipline-related subject areas. Topics vary by semester. See semester class schedule. Prerequisite: Course prerequisites will be announced in the Course Search and Registration.

**MAR - Marine Science**

See the Department of Biology for more information.

**MAR 301 Marine Science II: Marine Biology 5(Spec)**

An introduction to marine biology with emphasis on local fauna and flora. Prerequisites: general zoology; general botany.

**MAR 590 Special Problems in Marine Science 1-6(Spec)**

Prerequisites: permission of instructor.

**MBA - Master of Business Administration**

See the College of Business Administration for more information.

**MBA 500 Spreadsheet Applications in Business 1(1-0)**

Application of spreadsheet software tools to the solution of common business problems including budgeting, forecasting, and optimization for preparing information to support management decision-making. Course may not be included on any graduate degree program. Prerequisites: computer literacy as demonstrated by BIS 104, CPS 100 and prior knowledge of presentation graphics software; admission to the MBA program OR both graduate status and permission of the MBA director.

**MBA 501 Presentation Graphics Applications in Business 1(1-0)**

Application of presentation graphics software tools in preparing and delivering professional management briefings that provide information which supports the solution of common business problems. Course may not be included on any graduate degree program. Prerequisites: computer literacy as demonstrated by BIS 104, CPS 100 and prior knowledge of presentation graphics software; admission to the MBA program OR both graduate status; permission of the MBA director.

**MBA 502 Database Applications in Business 1(1-0)**

Application of a database management program to the solution of common business problems including sales and inventory management for preparing information to support decision making. Course may not be included on any graduate degree program. Prerequisites: computer literacy as demonstrated by BIS 104, CPS 100 and prior knowledge of database management software; admission to the MBA program OR both graduate status and permission of the MBA director.

**MBA 503 Professional Business Communications 2(2-0)**

Developing professional business communications skills within a team environment. Emphasis on both written and oral communications utilizing current technologies. Prerequisites: admission to the MBA program, or permission the MBA director.

**MBA 504 Using Financial Accounting Information 2(2-0)**

Introduces use of financial accounting income statements, balance sheets, and statements of cash flow in managerial planning, control, and evaluation. Prerequisites: admission to the MBA program, or permission of the MBA director.

**MBA 505 The Economic Environment of Business 2(2-0)**

Provides the economic tools necessary for graduate study in business: demand and supply, elasticity, costs and production, competitive and monopolistic markets, macroeconomics, and international trade. Not open to economics graduate students. Prerequisites: admission to the MBA program, or permission of the MBA director.

**MBA 506 Legal Environment of Business 2(2-0)**

Basic concepts concerning the interrelationships of business and its external environments. Managerial participation in and response to public policy issues and their resolutions. Prerequisites: admission to the MBA program, or permission of the MBA director.

**MBA 507 Introduction to Marketing Management 2(2-0)**

An introduction to the marketing management process including the marketing environment, buyer behavior, marketing analysis, segmentation, marketing strategy, the marketing mix, and social/ethical issues. Prerequisites: admission to the MBA program, or permission of the MBA director.

**MBA 508 Management and Organization 2(2-0)**

Introduction to the internal structure, processes, and control of organizations. Prerequisites: admission to the MBA program, or permission of the MBA director.

**MBA 509 Production/Operations Management 2(2-0)**

Concepts and applications of production and operations management in business and industry. Prerequisites: admission to the MBA program, or permission of the MBA director.

**MBA 510 Financial Management and Analysis 2(2-0)**

An introduction to basic finance principles and tools including the time value of money, risk and return, capital budgeting and the interpretation of financial statements. Prerequisites: admission to the MBA program, or permission of the MBA director.

**MBA 511 Statistics for Managerial Decisions 2(2-0)**

An introduction to descriptive and inferential statistics in a business decision context. Applications of various t-tests, ANOVA, multiple regression, and cross-tabulation are emphasized. Prerequisites: admission to the MBA program, or graduate status and permission of the MBA director.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**MBA 609 Information Systems Management 2(2-0)****MBA 610 Managing Information Systems in a Global Economy 3(3-0)****MBA 614 Introduction to Enterprise Systems Using SAP Software 3(3-0)****MBA 615 Executive Business Communication 3(3-0)****MBA 616 Quantitative Methods for Managerial Decision Making 3(3-0)****MBA 617 Forecasting for Business and Economics 3(3-0)****MBA 618 Continuing Registration for Final Research Project 1(1-0)****MBA 619 Accounting Information for Managers 2(2-0)****MBA 620 Managerial Accounting: A Management Perspective 3(3-0)****MBA 621 Globalization: Economic and Managerial Perspectives 3(3-0)****MBA 622 Managerial Accounting 3(3-0)****MBA 623 Strategic Marketing Management 3(3-0)****MBA 624 Organizational Behavior 3(3-0)****MBA 625 Corporate Finance and Investment Analysis 3(3-0)****MBA 626 Integrative Strategic Management 3(3-0)****MBA 627 Business Analytics with SAP 3(3-0)****MBA 628 Integrated MBA Capstone: Simulation and Performance Metrics 3(3-0)****MBA 629 Managing Behavioral Change 2(2-0)****MBA 630 Managing and Leading Individuals and Groups in Organizations 3(3-0)****MBA 639 Quantitative Applications for Managers 2(2-0)****MBA 640 Data Analysis for Managers 3(3-0)****MBA 649 Marketing Management 2(2-0)****MBA 650 Marketing-Based Management 3(3-0)****MBA 659 Managing in a Global Economy 2(2-0)****MBA 660 Global Business and Sustainability 3(3-0)****MBA 669 Financial Decision-Making 2(2-0)****MBA 670 Financial Analysis and Risk Management 3(3-0)****MBA 679 Economic Analysis for Managers 2(2-0)****MBA 680 Global Economic Environment 3(3-0)****MBA 688 Directed Work/Observation/Internship 1(1-0)****MBA 689 Strategic Management 2(2-0)****MBA 690 Strategic Management: Integrative Experience and Strategy Simulation 3(3-0)****MBA 697 Special Topics 1-6(Spec)****MBA 699 The MBA Project 4(4-0)****MED - College of Medicine**

See the College of Medicine for more information.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**MED 600 Medicine and Society 4(Spec)****MED 610 Essentials of Clinical Skills 4(Spec)****MED 630 Foundational Sciences of Medicine 11-22(Spec)**

**MED 640 Reproductive/Human Development 8(Spec)**  
**MED 650 Cardiopulmonary 9(Spec)**  
**MED 660 Renal/Endocrine 8(Spec)**  
**MED 740 Neurosciences and Behavior: Sciences 11(Spec)**  
**MED 750 Musculoskeletal/Dermatology 5(Spec)**  
**MED 760 Gastrointestinal 8(Spec)**  
**MED 770 Hematology/Oncology 5(Spec)**  
**MED 780 SYNAPSE 5(Spec)**  
**MED 797 Special Topics: Medical Clerkship Elective 1-30(Spec)**  
**MED 800 Comprehensive Community Clerkship 16(Spec)**  
**MED 810 Surgery 8(Spec)**  
**MED 820 Hospital Medicine 8(Spec)**  
**MED 830 Psychiatry 4(Spec)**  
**MED 840 Obstetrics and Gynecology 4(Spec)**  
**MED 850 Pediatrics 4(Spec)**  
**MED 900 Pediatrics Sub-Internship 6(Spec)**  
**MED 910 Surgery Sub-Internship 6(Spec)**  
**MED 920 Medicine Sub-Internship 6(Spec)**  
**MED 930 Emergency Medicine 4(Spec)**  
**MED 997 Special Topics: Medical Clerkship Elective 1-42(Spec)**

## MET - Meteorology

See the Department of Earth and Atmospheric Sciences for more information.

**MET 101QR Our Changing Climate 3(2-2)**  
*Scientific causes of climate change and its potential impact. Past, current, and future climates with emphasis on how scientists measure and interpret climate variation. Quantitative Reasoning. Satisfies University Program Group II laboratory requirement. (University Program Group II-A: Descriptive Sciences)*

**MET 140 Severe and Unusual Weather 3(3-0)**  
*Description and causes of tornadoes, hurricanes, explosive cyclones, floods and drought. The potential impact of global climate change on these phenomena. (University Program Group II-B: Quantitative and Mathematical Sciences)*

**MET 160 Professional Development in the Atmospheric Sciences 1(1-0)**  
 Development of a plan for success in meteorology based on understanding the requirements to enter the field and the resources CMU provides to meet them.

**MET 260 Introduction to Atmospheric Science 3(2-2)**  
 Description and analysis of the fundamental atmospheric phenomena that define our weather and climate: radiation, wind, moisture, stability, clouds, precipitation, convection, and cyclones. Pre/Co-requisite: One of the following: MTH 130, MTH 132, MTH 133, MTH 232, MTH 233.

**MET 270 Weather Forecasting Practicum 1(1-1)**  
 Application of basic concepts in meteorology to create presentations on past, current, and forecast weather data. Prerequisite: MET 260 with a C- or better.

**MET 275 Introduction to Meteorological Data 1(1-1)**  
 Introduction to how data is stored, shared, analyzed, and visualized in meteorology, with students conducting basic analysis and visualization of meteorological data. Prerequisite: MET 260 with a C- or better.

**MET 301 Climatology & Climate Change 3(3-0)**  
 A study of major climate types, their controls, distribution patterns and significance. Examination of the causes and implications of climatic change. Prerequisites: ENS 101 or MET 101 or MET 140 or MET 260 or GEL 201 or GEO 201.

**MET 305 Broadcast Meteorology 3(3-0)**  
 Examination of current issues and best practices in broadcast meteorology. Guided in-studio experience in forecast creation with the MAX system and development of presentation style. Prerequisite: MET 270 with a C- or better.

**MET 310 Atmospheric Thermodynamics 3(2-2)**  
 Properties of moist and dry air and thermodynamic processes in the atmosphere. Analysis of atmospheric stability. Theory and applications of thermodynamic diagrams. Prerequisites: MET 312 with a grade of C- or better; MTH 133. Pre/Co-requisite: PHY 145QR.

**MET 312 Meteorological Instruments and Observations 3(3-0)**  
 Design and use of meteorological instrumentation, including meteorological radar and satellites. Prerequisites: MET 270 with a C- or better.

**MET 315 Meteorological Data Analysis & Visualization 3(2-2)**  
 Analysis of different types of meteorological data using meteorological software within the Linux operating system, including proper ways to visualize and present data. Prerequisite: MET 270 with a C- or better or MET 260 and DAS 252 with a C- or better.

**MET 320WI Physical Meteorology 3(3-0)**  
 Microphysical processes in warm and cold clouds. Properties of radiation and radiative transfer in the atmosphere. Writing Intensive. Prerequisites: MET 312 with a C- or better; PHY 145; MTH 133.

**MET 330 Dynamic Meteorology I 3(3-0)**  
 Application of Newton's laws of motion to various scales of atmospheric phenomena. Vorticity, divergence and vertical motion. Prerequisites: MET 310, MET 320 with a C- or better; MTH 233; PHY 145. Pre/Co-requisite: MET 340.

**MET 335 Dynamic Meteorology II 3(3-0)**  
 Quasi-geostrophic theory and its application in weather prediction and diagnosis. Atmospheric waves, baroclinic instability theory. Prerequisite: MET 330 with a grade of C- or better.

**MET 340 Synoptic Meteorology I 3(2-2)**  
 Analysis of large-scale weather patterns through the application of concepts from physical and dynamical meteorology. Focus on cyclogenesis, frontogenesis, and the quasi-geostrophic framework. Prerequisites: MET 310 and MET 320 with a C- or better; MTH 233; PHY 145. Pre/Co-requisite: MET 330.

**MET 345 Synoptic Meteorology II 3(2-2)**  
 Advanced analysis of large-scale weather patterns through the application of concepts from physical and dynamical meteorology. Focus on quasi-geostrophic, isentropic, and potential vorticity frameworks. Prerequisite: MET 340 with a grade of C- or better. Pre/Co-requisite: MET 335.

**MET 375 Special Studies in Meteorology 1-6(Spec)**  
 Various special topics in atmospheric science. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisite: See Course Search and Registration.

**MET 450 Mesoscale Meteorology 3(3-0)**  
 Structure, dynamics, and morphology of atmospheric phenomena on the mesoscale including thunderstorms and mesoscale convective systems. Prerequisite: MET 335.

**MET 460 Global Climate Dynamics 3(3-0)**  
 Examines physical laws that govern the climate system; intraseasonal and longer climatic variations (General Circulation, Climate Change, teleconnections) and fundamental data analysis. Prerequisites: MET 301; STA 382. Pre/Co-requisites: MET 315; MET 330.

**MET 470 Advanced Weather Forecasting 3(2-2)**  
 Best practices for creation of forecasts of a variety of weather phenomena. Includes most appropriate ways of communicating impacts to affected users. Prerequisite: MET 340.

**MET 491 Internship 1-6(Spec)**  
 Internship in the field of atmospheric science. Prerequisites: Three or more courses in MET program (2 of which must be 300 level or greater), permission of instructor.

**MET 497 Independent Study 1-6(Spec)**  
 Research in meteorology with topics agreed upon by student and instructor. May be taken only by arrangement prior to registration. Prerequisites: Three or more courses in MET program (2 of which must be 300 level or greater), permission of instructor.

**MET 575 Advanced Special Studies in Meteorology 1-6(Spec)**  
 Special topics and recent developments in geosciences that are not included in existing courses. Specific topic will be listed on student's transcript. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisite: See Course Search and Registration.

**MET 580WI Atmospheric Modeling 3(2-2)**  
 Numerical differencing techniques, stability analysis, structure and operation of commonly utilized weather and climate models, physical parameterizations and their implications. Writing Intensive. Prerequisites: MET 450; MET 315 or CPS 180; or admission to the Earth and Ecosystem Science Ph.D. program.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**MET 750 Scientific Communication 1-4(Spec)**

## MGT - Management

See the Department of Management for more information.

**MGT 210 Effective Supervision: Principles and Practices 3(3-0)**  
 Prepares students to be effective first-line supervisors in a variety of organizational settings by using sound principles and practices applied to basic managerial processes. Identical to HSA 210. Credit may not be earned in more than one of these courses.

**MGT 258 Effective Management of Human Resources in Organizations 3(3-0)**

Applying the underlying principles of employee behavior to the effective design, use, and management of human resource systems in organizations. May be offered as Writing Intensive. Pre/co-requisite: BIS 101.

**MGT 303 Integrated Supply Chain Management 3(3-0)**  
 Application of concepts and tools in purchasing, production and distribution of goods and services along an integrated supply chain in organizations. Identical to MKT 303. Credit cannot be earned in more than one of these courses. Prerequisites: Tier 2 Admission to Professional Business Studies; ACC 255, BIS 255, MGT 258. Co-requisites: FIN 302, MKT 304.



**MGT 310 Small Business Management 3(3-0)**

The course covers concepts, processes, and techniques for starting and managing a small business. It focuses on management processes that are unique to small businesses. Prerequisites: 56 semester hours completed.

**MGT 311 Operations and Supply Chain Management 3(3-0)**

Application of concepts and tools in purchasing production and distribution of goods and services along an integrated supply chain in organizations. Identical to MKT 311. Credit may not be earned in more than one of these courses. Prerequisites: Admission to BSBA Degree; BIS 255; Co-requisites: BUS 321, MKT 301.

**MGT 312 Introduction to Management 3(3-0)**

Introduction to the concepts, techniques, and processes of management as they pertain to business and other organizations. Prerequisite: 56 semester hours completed.

**MGT 320 Human Resource Management 3(3-0)**

Examines process for providing and maintaining productive human resources in an organization. Includes recruitment, selection, training, performance appraisal, compensation, labor relations, and health and safety. Prerequisites: MGT 258 or MGT 312, 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 333 Purchasing Management 3(3-0)**

Introduction to concepts, models, and techniques in Purchasing Management, with special emphases on vendor management, materials management, and purchasing strategy. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 335 Introduction to Management Science 3(3-0)**

Basic concepts and applications of quantitative methods in management decisions. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 340 Production/Operations Management 3(3-0)**

An introduction to production and operations management concepts, tools and techniques as applied in service and manufacturing organizations. Prerequisites: 56 semester hours completed.

**MGT 348 Dynamics of Organizational Behavior 3(3-0)**

Integrative theory of organizational behavior. Human motivation influenced by leadership, the organization itself, and its social environment. Prerequisites: MGT 258 or MGT 312, 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 355 Communications: Managerial Applications 3(3-0)**

An applications-oriented class exposing students to many of the common communication-related situations, which they will soon face as managers in business and industry. Prerequisites: MGT 258 or MGT 312; 348 is recommended; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 357 Women in Management 3(3-0)**

*Explores women in management focusing on social phenomena shaping historical contributions and inequalities facing women at work today, specifically opportunities/challenges pursuing a management career. (University Program Group IV-A: Studies in Discrimination)*

**MGT 360 Managing Cultural Differences and Diversity in a Global Economy 3(3-0)**

Theories, procedures, and methodology for managing cultural differences and diversity in a global economy. Covers culture, diversity, international human resources and organizational behavior, and ethics. Prerequisites: MGT 258 or MGT 312; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 365 International Business 3(3-0)**

Environment and operations of multinational business. Public policy issues and their influence on internal management. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 390 Field Studies 3(3-0)**

Activities which may include industrial visitations and work study in conference with supervision of cooperating organization, professor, and student. Prerequisites: permission of instructor; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 397 Special Topics 3-6(Spec)**

Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcript. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 400 Global Concepts for Sustainable Development 3(Spec)**

Students will learn the basic concepts used in sustainable development and apply them through the use of cases and simulations. Prerequisites: ECO 301, ENV 101, MGT 365.

**MGT 442 Computer Applications for Production Operations Management 3(3-0)**

Simulation modeling and application of existing computer software for production and operations decisions. Prerequisites: MGT 303/MKT 303 or MGT 340; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 445 Compensation Administration 3(3-0)**

Theory, procedures, and methodology for developing and administering compensation systems. Covers job evaluation methods, wage and salary structure development, incentive pay systems, and benefits administration. Prerequisites: MGT 258 or MGT 312, MGT 320; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 446 Industrial Relations 3(3-0)**

Relationships between organized labor and management analyzed in the light of contemporary conditions. Recommended: MGT 258 or MGT 312 prior to enrollment. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 447 Personnel Selection and Evaluation 3(3-0)**

Study of personnel selection policies and practices and employee evaluation approaches and techniques, including legal issues and concerns, as they are applied in complex organizations. Prerequisites: MGT 320; STA 282; 56 hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 457 Seminar in International Business 3(3-0)**

A case study course for analysis and integration of international business functions in order to develop a cross-cultural perspective in dealing with global challenges. Prerequisites: completion of MGT 365; 86 semester hours completed and Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor. Recommended: ECO 372, FIN 573, and MKT 560.

**MGT 484 Human Resource Training and Development 3(3-0)**

This course examines theories, concepts, and process of human resource training and development in modern organizations to meet current and future needs. Prerequisites: MGT 258 or MGT 312; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor. Recommended: MGT 320.

**MGT 487 Project Course for Sustainable Development 3(Spec)**

The students will apply the basic tools of sustainable development within a real-world setting through completion of an applied project. Prerequisite: MGT 400.

**MGT 490 Internship in Management 1-6(Spec)**

Full or part time on the job learning experience for one or more semesters in industry, government or business organizations. Prerequisites: permission of instructor and of department chairperson; 56 semester hours completed; admission to Professional Business Studies or listed on signed major in the Department of Management.

**MGT 491 Independent Studies 1-6(Spec)**

Directed reading or research on an approved topic. Open to seniors in good academic standing. Prerequisites: prior permission of instructor and department chairperson; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 495 Global Management Strategy 3(3-0)**

An integrative, cross-functional capstone course focusing on the process of strategic planning and management from the general management perspective, and on the domestic, multinational, and global dimensions. Primarily a case course. Prerequisites: 86 semester hours completed; completion of 300-level common body knowledge requirements in business; admission to Professional Business Studies. Graduating seniors only.

**MGT 499 Integrated Capstone-Strategic Management 3(3-0)**

An integrative capstone course applying and analyzing financial, marketing, supply chain and other business functions within a global strategic management perspective. Prerequisites: 86 semester hours completed; MGT 258 or MGT 312; BUS 300QR or BUS 503QR; BUS 331; FIN 302 or FIN 332, MKT 304 or MKT 301; Admission to the BSBA Degree. Preference will be given to graduating seniors.

**MGT 500 Comparative Labor Relations Systems 3(3-0)**

Comparative analysis of the history, structure, institutional arrangements, and philosophy of the labor relations systems of several countries in advanced stages of industrialization. Prerequisites: MGT 320; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 516 Management and Women 3(3-0)**

Enables both male and female students to understand the opportunities, challenges, and problems confronting women in their pursuit of careers in management, and to manage more effectively. Prerequisites: MGT 312; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 520 Management in Health Care Facilities 3(3-0)**

Management problems and practices in health care facilities. Prerequisites: MGT 312; MSA 650; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.



**MGT 533 Purchasing Strategy 3(3-0)**

Provides a managerial perspective, and understanding of the impact that purchasing and supply chain management strategies have on the success of organizations. Prerequisites: MGT 333 and admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor, or graduate standing.

**MGT 542 Inventory and Materials Management 3(3-0)**

The study of the concepts, models and systems for material management and production planning. Prerequisites: MGT 303/MKT 303 or MGT 340; STA 282; 86 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MGT 543 Management and Control of Quality 3(3-0)**

In-depth study of management and statistical techniques employed in the analysis, design and implementation of quality assurance and control systems in manufacturing and service organizations. Prerequisites: MGT 303/MKT 303 or MGT 340; STA 282 or STA 382; 86 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor, or graduate standing.

**MGT 545 Operations Strategy 3(3-0)**

The treatment of strategic planning and competitive issues in operations management in a domestic and global environment. Prerequisites: MGT 303/MKT 303 or MGT 340; 86 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor, or graduate standing.

**MGT 597 Special Topics 1-6(Spec)**

Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcripts. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**MGT 600 Principles of Management Science/Management Information Systems 3(3-0)****MGT 643 Human Resource Management 3(3-0)****MGT 645 Personnel Compensation Practice and Process 3(3-0)****MGT 646 Labor Relations Issues 3(3-0)****MGT 647 Employee Selection and Evaluation 3(3-0)****MGT 649 Seminar in Organizational Development 3(3-0)****MGT 657 International Management 2(2-0)****MGT 667 International Business 3(3-0)****MGT 791 Independent Studies 1-6(Spec)****MGT 797 Special Topics 3-6(Spec)****MGT 798 Thesis 1-6(Spec)**

## MHA - Master of Health Administration

*Contact the School of Health Sciences for more information.*

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**MHA 601 Statistics for Health Professionals 3(3-0)****MHA 602 Managerial Epidemiology 3(3-0)****MHA 603 Health Informatics and Quality Improvement 3(3-0)****MHA 604 Quantitative Decision-Making for Health Administration 3(3-0)****MHA 605 International Health Systems, Policy and Administration 3(3-0)****MHA 697 Health Administration Field Experience 1-6(Spec)****MHA 698 Applied Research Project in Health Administration 1-6(Spec)****MHA 699 Health Administration Internship 1-6(Spec)**

## MKT - Marketing

*See the Department of Marketing, Hospitality, and Logistics for more information.*

**MKT 151 Marketing and Society 3(3-0)**

An overview of the environment, concepts and current trends that shape the world of marketing. Attention is paid to the impact of marketing on society. This course will not be accepted for credit for departmental or College of Business Administration major or minors.

**MKT 220 Introduction to Retail Merchandising 3(3-0)**

An overview of merchandising systems and procedures as they relate to organizational structure, product planning, and inventory control.

**MKT 255 Introduction to Logistics and Physical Distribution 3(3-0)**

Functions, tactics, and current trends that shape logistics management. Introduces fundamentals of logistics, including inventory, transportation, and distribution. Prerequisite: 26 semester hours completed.

**MKT 297 Special Topics 1-6(Spec)**

Selected problems of interest to students which are not normally included in existing courses. Specific topics will be listed on students' transcripts.

**MKT 300 Introduction to Marketing 3(3-0)**

A basic introduction to the marketing environment, the marketing mix, marketing management and the place of marketing in world society. Credit may not be earned in both MKT 304 and MKT 300; cannot be counted on any BSBA major including Marketing, Logistics Management, or Hospitality Services Administration. May be offered as Writing Intensive. Prerequisite: 56 semester hours completed.

**MKT 301 Integrated Marketing Principles 3(3-0)**

An introduction to marketing and how it provides customer and market information to the organization so that strategic and tactical decisions are customer-focused and market-driven. Prerequisites: Admission to BSBA Degree, BIS 255; Co-requisites: BUS 321, MGT 311/MKT 311.

**MKT 303 Integrated Supply Chain Management 3(3-0)**

Application of concepts and tools in purchasing, production and distribution of goods and services along an integrated supply chain in organizations. Identical to MGT 303. Credit cannot be earned in more than one of these courses. Prerequisites: Tier 2 Admission to Professional Business Studies; ACC 255, BIS 255, MGT 258. Co-requisites: MKT 304, FIN 302.

**MKT 304 Integrated Marketing Management 3(3-0)**

An introduction to marketing and how it provides customer and market information to the organization so that strategic and tactical decisions are customer-focused and market-driven. Prerequisites: Tier 2 Admission to Professional Business Studies; ACC 255, BIS 255, MGT 258. Co-requisites: MGT/MKT 303, FIN 302.

**MKT 305 Buyer Behavior 3(3-0)**

Characteristics of consumers affecting the decision process in buying and the marketing implications. Prerequisites: MKT 300 or MKT 304, 56 semester hours completed, and admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 310 Marketing Communications 3(3-0)**

An overview of advertising, personal selling and sales promotion, and other techniques that an organization would use to communicate with its target markets. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 311 Operations and Supply Chain Management 3(3-0)**

Application of concepts and tools in purchasing production and distribution of goods and services along an integrated supply chain in organizations. Identical to MGT 311. Credit may not be earned in more than one of these courses. Prerequisites: Admission to BSBA Degree; BIS 255; Co-requisites: BUS 321, MKT 301.

**MKT 315 Advertising Media 3(3-0)**

Evaluation of media in relationship to marketing objectives. Selection of media space/time and decision-making in development of media schedules. Prerequisites: 56 semester hours completed; MKT 310 or JRN 360 or approval of instructor; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 320 Retail Management 3(3-0)**

Functions of a retail establishment are examined. Significant developments taking place in the major environments of retailers-- social, economic, technological, and legal. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor; or with approval from the Office of Undergraduate Business Studies.

**MKT 325 Merchandising Management 3(3-0)**

Current problems in merchandising which include technological aspects, inventory valuation and reporting procedures, stock planning, and product mix considerations. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor; Recommended: Pre/Co-Requisite: MKT 320.

**MKT 330 Marketing Channels 3(3-0)**

Institutions, physical flows, behavioral and economic relationships comprising channel systems in the marketing environment. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 340 Personal Selling 3(3-0)**

Explores personal selling as an element of a firm's promotional efforts to create value and serve customers, with emphasis on skill development and value creation. Prerequisite: 30 semester hours completed.

**MKT 341 Services Marketing 3(3-0)**

Planning and implementation of marketing strategy and application of the marketing mix to services including hospitality, banking and health services. Identical to HSA 341. Credit may not be earned in more than one of these courses. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 350 Marketing Analysis 3(3-0)**

Analysis of marketing data: marketing research, statistics, marketing cost/revenue analysis and sales and market forecasting. Prerequisites: MKT 300 or MKT 304; STA 282; ACC 202 or ACC 255; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 360 Electronic Commerce and Marketing Strategy 3(3-0)**

Basic concepts and tools for understanding and exploring market opportunities and marketing strategies associated with global electronic commerce. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 390 Field Studies 3(3-0)**

Activities which may include industrial visitations and work study in conference with supervision of cooperating organization, professor, and student. Prerequisites: permission of instructor; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 397 Special Topics 1-6(Spec)**

Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcript. Prerequisites: 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 410 Advertising Management 3(3-0)**

Provides an understanding and evaluation of the advertising function within the modern business environment. Management decision-making is stressed in advertising as a vital communication tool. Prerequisites: MKT 300 or MKT 304, MKT 310 or JRN 360; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 420 Advanced Selling and Negotiation 3(3-0)**

The methods and consultative selling skills necessary to develop and deliver effective sales presentations, negotiate successfully, and form relationships with business-to-business customers. Pre/Co-requisite: MKT 300 or 304 or BCA 265QR. Prerequisites: MKT 340; 56 hours; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 422 Cooperative/Internship in Retailing 3-6(Spec)**

Full time work experience under the supervision of the department and participating employer. Prerequisites: permission of instructor; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor. Recommended: MKT 320.

**MKT 425 Retail Strategy 3(3-0)**

Development of strategic methods for addressing retail problems. Problem solving orientation within the retail organizational setting. Prerequisites: MKT 320; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor. Recommended: MKT 422.

**MKT 431 Logistics Operations 3(3-0)**

Operational issues, management techniques and technology applied to distribution operations. Focus is on the integration of logistics operations of all firms within the supply chain. Prerequisites: MKT 255; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 432 Logistics Strategy 3(3-0)**

Strategic planning of a firm's logistics system in a global marketplace, including customer service, inventory, warehousing and transportation strategies. Prerequisites: MKT 255; MKT 300 or MKT 304; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 435 Transportation 3(3-0)**

The role of transportation systems in an economy, transport system pricing, and the management of transportation operations. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 440 Sales Management 3(3-0)**

The organization, planning, operation and control of the business-to-business sales force from the perspective of the sales manager. Prerequisites: MKT 300 or MKT 304 or BCA 265QR; MKT 340; 86 Hours; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 450 Marketing Research 3(3-0)**

Methodology used in gathering, recording, and analyzing marketing data to aid executives in making marketing decisions. Prerequisites: MKT 300 or MKT 304; STA 282; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor. Recommended: BUS 300.

**MKT 460 Organizational Selling 3(3-0)**

Explores methodologies used by sales professionals to collaborate with the leadership of customer organizations in an effort to develop solutions that sustain/enhance their competitive advantage. Prerequisites: MKT 300 or MKT 304 or BCA 265QR; MKT 340; 86 hours; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 465 Supply Chain Management 3(3-0)**

Integration of competencies in logistics related areas. Logistical policy establishment and decision-making for solving complex logistical problems that focus on global and intercompany logistics systems. Prerequisites: MKT 431, MKT 432; 86 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 490 Internship in Marketing/Logistics 3-6(Spec)**

A full time work experience occurring within a marketing or logistics organization. Detailed written report and assigned readings required. Prerequisites: Permission of instructor and department chairperson; 56 semester hours completed; Marketing or logistics major in addition to MKT 300 or MKT 304; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor. Recommended: Completion of 6 credit hours in marketing.

**MKT 491 Independent Studies 1-6(Spec)**

Directed reading or research on an approved topic. Open to seniors in good academic standing. Prerequisites: prior permission of instructor and department chairperson; 56 semester hours completed; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor.

**MKT 499 Strategic Marketing Problems 3(3-0)**

A functionally integrative capstone course which focuses upon developing a decision-making framework. Students formulate and implement comprehensive marketing strategies within a global context. Prerequisites: 86 semester hours completed; MKT 255, MKT 305, MKT 310, MKT 450; admission to the BSBA degree; if not earning a BSBA degree, course listed on a declared major or minor.

**MKT 555 Market and Sales Forecasting 3(3-0)**

Develops familiarity with methods most commonly used in market and sales forecasting. Both qualitative and quantitative methods are included with emphasis on the latter. This course may be offered in an online format. Prerequisites: one course in MKT; one course in statistics or MKT 450; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor; 86 semester hours completed; or admission to the MBA or MSA program; or permission of the MBA or MSA director.

**MKT 560 International Marketing 3(3-0)**

Policies and practices employed in international business. Considers problems in international payments, trade and investment with special emphasis on integrating managerial dimensions with related economic principles. This course may be offered in an online format. Prerequisites: MKT 300 or 304; Admission to the BSBA Degree; if not earning a BSBA Degree, course listed on a declared major or minor; 86 semester hours completed; or graduate standing.

**MKT 597 Special Topics 1-6(Spec)**

Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcripts. Prerequisites: MKT 300 or MKT 304; admission to Professional Business Studies; senior standing; 86 semester hours completed.

**MKT 599 Humanitarian Logistics Project 3(Spec)**

Provide students the opportunity to work on a large-scale service-learning humanitarian logistics project supervised by a faculty member. Prerequisites: Completion of 86 credit hours. Recommended: MKT 300 or 304.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**MKT 631 Lean Logistics Operations 3(3-0)****MKT 632 Integrated Logistics Strategy 3(3-0)****MKT 633 Risk-based Logistics Networks 3(3-0)****MKT 650 Marketing Research: Managerial Applications 2(2-0)****MKT 663 Product Management 2(2-0)****MKT 664 Promotional Strategy 2(2-0)****MKT 698 The Logistics Project 4(4-0)****MKT 791 Independent Studies 1-6(Spec)****MKT 797 Special Topics 3-6(Spec)****MKT 798 Thesis 1-6(Spec)**

## MLE - Middle Level Education

*See the Department of Teacher and Special Education for more information.*

**MLE 361 Pre-Student Teaching Practicum 2(1-4)**

Pre-service Teachers will gain practical experience through observing, interacting, collaborating, and teaching in a pre K-12 classroom setting. Identical to EDU 361. Credit may not be earned in more than one of these courses. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [General Education Students take EDU 280 or HDF 100; Special Education Majors must take PSY 220]; EDU 290, 393. Co-requisites: EDU 320, 330, 343, 345.

**MLE 362 Mathematics and Reading Practicum 1(0-2)**

Pre-service teachers will gain practical experience through observation, interaction, collaboration, preparation, and delivery of reading and mathematics instruction in a pre K-8 classroom setting. Identical to EDU 362. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Admission to Teacher Education Program; EDU 280 or HDF 100 (students with a major in "teachers of students with emotional impairment" or a major in "teachers of students with cognitive impairment" are required to have SPE 126 and PSY 220); EDU 290, 330, 393. Co-requisites: EDU 320, 431.

**MLE 363 Science and Social Studies Practicum 1(0-2)**

Pre-service teachers will gain practical experience through observation, interaction, collaboration, preparation, and delivery of science and social studies instruction in a pre K-8 classroom setting. Identical to EDU 363. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Admission to Teacher Education Program; EDU 280 or HDF 100 (students with a major in "teachers of students with emotional impairment" or a major in "teachers of students with cognitive impairment" are required to have SPE 126 and PSY 220); EDU 290, 320, 330, 393, 431; EDU/MLE 362. Co-requisites: EDU 343, 345, 495.

**MLE 381 Needs and Characteristics of Young Adolescents 3(3-0)**

An orientation to the unique developmental needs and characteristics of young adolescents. Prerequisites: Have a signed Middle Level Education Minor; junior status. Recommended: Successful completion (C+ or higher) of EDU 280 or HDF 100.

**MLE 382 Middle Level School Concept, Structures and Programs 3(3-0)**

An orientation to middle level education which focuses on the middle level school concept, structures, and programs. Prerequisite: MLE 381.

**MLE 383 Student Diversity in the Middle Level Classroom 3(3-0)**

An orientation to the multiple aspects of human diversity in the middle level classroom. Prerequisite: MLE 382.

**MLE 384 Meeting the Diverse Needs of Learners in the Middle Level Classroom 3(3-0)**

Instructional strategies and assessment/evaluation methods and materials for middle level classroom teachers appropriate for the unique developmental needs and characteristics of young adolescents. Prerequisite: MLE 383. Co-requisite: MLE 385.

**MLE 385 Curriculum in the Middle Level School 3(3-0)**

Curriculum for middle level classroom teachers to meet the unique developmental needs and characteristics of young adolescents. Prerequisite: MLE 383. Co-requisite: MLE 384.

**MLE 570 Issues in Middle Level Education 1-3(Spec)**

A focus on current issues in middle level education. Students will help select specific topics for in-depth study. Prerequisites: MLE 383 or 643.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**MLE 613 Current Educational Issues 3(3-0)****MLE 641 Young Adolescent Needs and Characteristics 3(3-0)****MLE 642 Concepts, Structures, and Programs for Middle Level Schools 3(3-0)****MLE 643 Student Diversity Issues in the Middle Level Classroom 3(3-0)****MLE 644 Issues in Meeting the Diverse Needs of Middle Level Learners 3(3-0)****MLE 645 Middle Level School Curriculum 3(3-0)****MLE 646 Middle Level Field Experience 3(3-0)****MLE 687 Independent Study in Middle Level Education 1-6(Spec)****MLE 780 Master of Arts Capstone Experience 3(3-0)****MMD - Multimedia Design**

For more information, contact the College of the Arts and Media, or see the Multimedia Design Minor in the Index.

**MMD 495 Multimedia Design Capstone 1(1-0)**

The course focuses on the documentation and presentation of skills developed during the Multimedia Design Minor. Must be taken in the last two semesters prior to graduation. This course may be offered in an online format. Prerequisites: ART 231; BCA 223; CPS 282; JRN 220; All with a C or better; Senior status.

**MPH - Master of Public Health**

See the School of Health Sciences for more information.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**MPH 619 Continuing Registration for Final Research Project 1(1-0)****MPH 640 Biostatistics in Public Health 4(3-1)****MPH 641 Data Management and Analysis in Public Health 3(3-0)****MPH 642 Social and Behavioral Sciences in Public Health 3(3-0)****MPH 644 Rural Health 3(3-0)****MPH 646 Epidemiology for Public Health 3(3-0)****MPH 647 Global Health Epidemiology 3(3-0)****MPH 648 Health Policy and Management 3(3-0)****MPH 650 Biological Basis of Public Health 3(3-0)****MPH 652 Environmental Health Sciences 3(3-0)****MPH 654 Public Health Leadership 3(3-0)****MPH 655 Program Planning and Evaluation 3(3-0)****MPH 658 Health Planning and Assessment 3(3-0)****MPH 660 Program Evaluation 3(3-0)****MPH 662 Public Health and Aging 3(3-0)****MPH 664 Public Health Communication and Informatics 3(3-0)****MPH 666 Substance Abuse Services 3(3-0)****MPH 667 Maternal and Child Health 3(3-0)****MPH 668 Ethics in Public Health 3(3-0)****MPH 670 Methods in Public Health Research 3(3-0)****MPH 740 Biostatistics II for Public Health 3(3-0)****MPH 746 Intermediate Epidemiological Methods 3(3-0)****MPH 790 Applied Practice Experience 2(Spec)****MPH 796 Integrative Learning Experience 1-3(Spec)****MPH 798 Thesis 1-6(Spec)****MSA - Master of Science in Administration**

For more information on the MSA degree, consult the current Graduate Studies Bulletin.

**MSA 501 The Emotionally Intelligent Organization 3(3-0)**

An examination of emotional intelligence integrating leadership as a foundation for managing organization change. This course may be offered in an online format. Prerequisites: 86 semester hours completed; or graduate standing.

**MSA 502 Professional Development in Organizations 3(3-0)**

Examines the process of preparing professional development strategies, defining content, and selecting professional development activities used by administrators to improve employee performance throughout their careers. This course may be offered in an online format. Prerequisites: 86 semester hours completed or admission into a graduate program.

**MSA 503 Gender and Generational Supervision 3(3-0)**

The course analyzes how gender and generational differences manifest themselves in the workplace, and how to effectively work within and manage those differences. This course may be offered in an online or hybrid format. Prerequisites: 86 semester hours completed or admission into a graduate program.

**MSA 504 Strategies and Proposals in Government Acquisitions 3(3-0)**

Provides a framework for formulating strategies used in federal acquisitions. Examines the request for proposal (RFP) process, and the preparation of proposals, reviews, and follow-up. This course may be offered in an online or hybrid format. Prerequisite: 86 semester hours completed or graduate standing.

**MSA 506 Evaluation, Coaching and Mentoring 3(3-0)**

Post-hire evaluation, coaching, and mentoring: Course examines the alignment of individual and group performance with an organization's strategic vision by developing effective performance management processes. This course may be offered in an online format.

**MSA 510 The Culturally Intelligent Organization 3(3-0)**

Provides strategies for effective cross-cultural administration while focusing on developing personal cultural intelligence. Investigates the geo-leadership models that impact administration across borders and cultures. This course may be offered online. Prerequisites: 86 semester hours completed; or graduate standing.

**MSA 511 Increasing Mindfulness in Organizations 1(1-0)**

Focuses on techniques for increasing mindfulness and the benefits of doing so in organizations. Analyzes connection between mindfulness and wellbeing, engagement, retention, and satisfaction. This course may be offered in an online format. Prerequisite: 86 semester hours completed; or graduate standing.

**MSA 512 Transformational Leadership in the 21st Century 1(1-0)**

This is a concentrated study of transformational leadership in organizations. This course may be offered in an online format. Prerequisite: 86 semester hours completed; or graduate standing.

**MSA 519 Artificial Intelligence and the Inclusive Workplace 1(1-0)**

Introduces the equity and inclusion issues related to the algorithms used in applications of machine learning and artificial intelligence in organizations. This course may be offered in an online format. Prerequisite: 86 semester hours completed; or graduate standing.

**MSA 520 Ethics in Digital Transformation 3(3-0)**

Focuses on the ethical decision-making process that derive from the moral challenges related to technology, information, and algorithmically driven systems. This course may be offered in an online format. Prerequisite: 86 semester hours completed; or graduate standing.

**MSA 521 Digital Culture & Social Media Strategies 3(3-0)**

Focuses on best practices and principles administrators need to successfully engage in virtual communities and advance interpersonal influence to produce desired results across departments. This course may be offered in an online format. Prerequisite: 86 semester hours completed; or graduate standing.

**MSA 522 Digital Leadership 3(3-0)**

Examines the unique complexities of leading in a digital environment including transformation, decision making, collaboration, and resource allocation. This course may be offered in an online format. Prerequisite: 86 semester hours completed; or graduate standing.



**MSA 530WI Foundations of Wellness Administration 3(3-0)**

Examines foundational underpinnings of development, promotion, administration, and evaluation of wellness programs within organizations. Reviews organizational culture supporting wellness programs and employee wellbeing. Writing Intensive. This course may be offered in an online format. Prerequisite: 86 semester hours completed or graduate standing.

**MSA 540 Legal Considerations of Contract Administration 3(3-0)**

Examines legal and regulatory aspects associated with federal acquisition and contracts including: standards of conduct, governmental liability, dispute processes, and administrative and judicial resolution methods. This course may be offered in an online or hybrid format. Prerequisite: 86 hours completed or graduate standing.

**MSA 555 Human Relations Skills 3(3-0)**

An introduction to the theories, skills, and models utilized in developing helping relationships in organizations. Identical to CED 555. Credit may not be earned in more than one of these courses. This course may be offered in an online format. Prerequisite: Senior standing or graduate status.

**MSA 573WI Workplace Violence: Awareness and Prevention 3(3-0)**

Focuses on the complexities of workplace violence and organizational implications. Examines theory, applied concepts, and processes essential to awareness and mitigation of potentially violent situations. Writing Intensive. This course may be offered in an online format. Prerequisite: 86 semester hours completed; or graduate standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**MSA 600 Foundations of Research Methods in Administration 3(3-0)****MSA 601 Organizational Behavior and Leadership 3(3-0)****MSA 602 Financial Fluency for Leaders 3(3-0)****MSA 603 Leading through Strategic Planning and Implementation 3(3-0)****MSA 604 Inclusive and Intercultural Leaders 3(3-0)****MSA 607 Program Management in Complex Organizations 3(3-0)****MSA 608 Succession Planning 3(3-0)****MSA 609 Ethical and Legal Dimensions of Private Sector Organizations 3(3-0)****MSA 611 Contract Administration 3(3-0)****MSA 612 Grants Fiscal Administration 3(3-0)****MSA 613 Project Administration 3(3-0)****MSA 614 Ethics in Research Administration 3(3-0)****MSA 617 Clinical Research Administration 3(3-0)****MSA 618 International and Comparative Employment Relations 3(3-0)****MSA 619 Continuing Registration for Final Research Project 1(1-0)****MSA 622 Research Facilities Administration and Cost 3(3-0)****MSA 623 Interagency Collaboration, Teambuilding and Leadership 3(3-0)****MSA 627 Concepts in Homeland Security Crisis and Response 3(3-0)****MSA 634 Managerial Accounting Concepts 3(3-0)****MSA 635 Financial Management 3(3-0)****MSA 640 Quantitative Applications in Decision Making 3(3-0)****MSA 641 Historical and Cultural Perspectives on Philanthropy 3(3-0)****MSA 642 Principles, Theory and Ethical Practices in Fundraising and Grant Making 3(3-0)****MSA 643 Administration of Annual, Capital Campaigns and Major Gifts 3(3-0)****MSA 644 Philanthropy: The Role of Foundations, Non Profit Organizations in Society 3(3-0)****MSA 645 Strategic Philanthropy: Corporations, Foundations, Individuals and Bequests 3(3-0)****MSA 646 Foundations of Philanthropic Organizations 3(3-0)****MSA 647 People and Project Administration 3(3-0)****MSA 660 Marketing Administration 3(3-0)****MSA 677 Disruption, Innovation, Transformation and Change 3(3-0)****MSA 681 Administrative Practicum 1-3(Spec)****MSA 690 Internship 1-3(Spec)****MSA 691 Independent Study 1-2(Spec)****MSA 696 Special Topics 3(3-0)****MSA 698 Directed Administrative Portfolio 3(3-0)****MSA 699 Applied Research Project in Administration 3(Spec)****MSL - Military Science and Leadership**

*See the Department of Military Science for more information. The focus of all Military Science Courses is leadership development. All courses include student work using the Army's Leadership Framework. The curriculum is fully integrated and designed to be completed in progressive order. All on-campus courses include a student-led Leadership Lab, which includes hands-on training in: rappelling, rock climbing, high-ropes course, marksmanship, water survival, orienteering, map reading, first aid, weapons, drill, squad tactics, patrolling, and team building exercises. The complete description of the Department of Military Science is found in the College of Liberal Arts and Social Sciences.*

**MSL 101 Introduction to the Army and Critical Thinking 2(Spec)**

Introduction to effective leadership, communication, life skills, cultural understanding, goal setting, time management, and comprehensive fitness that relate to the Army profession.

**MSL 102 Introduction to the Profession of Arms 2(Spec)**

An introduction to the professional challenges and competencies that are needed for effective execution of the Profession of Arms and Army communication.

**MSL 201 Individual Leadership Studies 3(Spec)**

Studies in personal well-being, self-development, problem solving, and decision-making; group dynamics, communication and values and ethics; introduces team-building, leading and assessing group actions. Prerequisites: MSL 102.

**MSL 202 Leadership and Teamwork 3(Spec)**

Continuing studies in self-development and team-building. Introduces group problem solving, planning group actions, risk management, diversity, persuasion, and the profession of arms. Recommended: MSL 201.

**MSL 301 Adaptive Team Leadership 4(Spec)**

Planning, leading, assessing small unit actions. Studies in problem-solving, training management, Principles of War, tactics, warrior ethos. History and future of the Army. Recommended: MSL 101, 102, 201, 202.

**MSL 302 Leadership in Changing Environments 4(Spec)**

Planning, leading, and assessing small unit actions. Studies in ethical decision-making, military briefings, writing, power, personality, followership, diversity, group cohesion and dysfunction. Prerequisite: MSL 301.

**MSL 397 Special Topics in Military Science and Leadership 1-6(Spec)**

Studies in military science or leadership. Topics may include military leadership, military logistics, military administration, military operations or military history. Prerequisite: permission of the MSL Chairperson.

**MSL 401 Mission Command and Army Profession 4(Spec)**

Explore the dynamics of leading in complex situations of current Military operations. Examine: customs; courtesies; military law; principles of war. Prerequisites: MSL 301, 302.

**MSL 402 Mission Command II and the Company Grade Officer 4(Spec)**

Students will learn the Army Profession and the ability to demonstrate the Seven Army Values, Soldier's Creed, and the Warrior Ethos. Prerequisites: MSL 301, 302, 401.

**MST - Museum Studies**

*See the Museum Studies Minor for more information.*

**MST 310 Introduction to Museums 3(3-0)**

An introduction to the role of museums in society, as well as to museum management, operations and careers. Prerequisite: 36 hours of course credit.

**MST 315 Museums, Stakeholders and Communities 3(3-0)**

Conceptual and practical knowledge for dealing effectively with diverse museum audiences, collaborators and stakeholders on mission-fulfilling activities that enhance the organization's value to society. Prerequisite: MST 310.

**MST 320 Collections Stewardship and Curatorial Work 3(3-0)**

This course covers basic museum collections management and care policies and procedures, as well as mission-based collections planning and curatorial research techniques. Prerequisite: MST 310.

**MST 325 Public Programming in Museums 3(3-0)**

This course focuses on developing mission-driven, audience-focused public and educational programs; planning, implementing and evaluating programs; and enhancing interpretive methods and skills. Prerequisite: MST 310.

**MST 546 Introduction to Museum Work 3(3-0)**

Exploration of the duties and responsibilities encountered in museum work. Collection care and development, exhibit preparation, and educational program development. Prerequisite: 56 hours of course credit.

**MST 547 Museum Science Laboratory 3(0-6)**

Experimentation with materials and techniques utilized within the museum profession. Primary emphasis is on exhibit preparation, model-building, and replica-making for educational usage. Prerequisites: MST 546; 56 semester hours of credit.

**MST 550 Museum Collections Management and Care 3(3-0)**

Curatorial techniques in museums including acquisition, cataloging, legal requirements, preservation, computerization and proper handling. Prerequisites: MST 546; 56 hours of course credit.



**MST 551 Museum Education and Interpretation Techniques 3(3-0)**

Interpretive methods used by museums including development and implementation of programs and enhancement of interpretive skills. Prerequisites: MST 546; 56 hours of course credit.

**MST 575 Independent Study in Museum Studies 3(3-0)**

Study of specific selected topics in museum theory or practice at a level suitable for advanced undergraduates or graduate students. Prerequisites: MST 310.

**MST 598 Museum Internship 6(Spec)**

Supervised work experience applying classroom concepts and skills in the operation and programming of a museum, historic site or other informal learning center. Prerequisites: Obtain permission of Director of the Museum Studies Program.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**MST 610 International Cultural Laws and Ethics 3(3-0)****MST 620 Museum Management 3(3-0)****MST 740 Seminar in Emergency Preparedness 3(3-0)****MST 750 Seminar in Advanced Exhibit Design and Construction 3(3-0)****MST 775 Seminar in Funding and Fundraising 3(3-0)****MST 798 Creative Endeavors in Museum Studies 3(3-0)****MTH - Mathematics**

*See the Department of Mathematics for more information.*

**MTH 101 Elementary Algebra 3(3-0)**

The real number system, variables, algebraic expressions, exponents, Cartesian coordinate system, linear equations, percent, polynomial operations, reading graphs. Word problems emphasized. This course may only be used as a General Elective on the BS degree. Cannot be used to fulfill the Area 2 Natural Sciences requirement. CR/NC only. This course may be offered in an online or hybrid format. Prerequisite: Placement.

**MTH 103QR Quantitative Reasoning for Informed Citizens 3(3-0)**

Quantitative reasoning skills useful in an individual's private, civic, and professional life. Topics may include: financial management, insurance, personal health, and environmental and social concerns. Quantitative Reasoning.

**MTH 104 Women in STEM Fields 3(3-0)**

*This course explores the roles, stereotypes, and contributions of women in STEM (Science, Technology, Engineering, and Mathematics) fields, and the barriers they face. Identical to WGS 104. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)*

**MTH 105 Intermediate Algebra 3(3-0)**

Rational and radical expressions and equations, integer and rational exponents, functions, graphs, systems of equations and inequalities, quadratic equations. Successful completion of this course satisfies the University Mathematics Competency requirement. Prerequisite: Placement or successful completion of MTH 101.

**MTH 107 College Algebra 3(3-0)**

Complex numbers, introduction to functions, zeros, graphing, linear functions, quadratic functions, intersections of graphs, interpreting graphs, inequalities, polynomial and rational functions, algebra of functions. Satisfies Mathematics Competency. Course does not count toward a major or minor in mathematics. Prerequisite: MTH 105; or placement.

**MTH 109 Plane Trigonometry 3(3-0)**

Solutions of triangles, trigonometric equations, and identities. No credit in MTH 109 after credit earned in MTH 130. Satisfies Mathematics Competency. Course does not count toward a major, minor in mathematics except for students pursuing a B.S. in Ed., Elementary Emphasis. This course may be offered in an online or hybrid format. Prerequisite: MTH 105; or placement.

**MTH 113 Mathematics: A Modeling Approach 3(3-0)**

*This course applies basic arithmetic to explore modern real-life problems, such as social choice (voting and fair division), management (traveling salesman problems), finance, and statistics. Satisfies Mathematics Competency. (University Program Group II-B: Quantitative Mathematical Sciences.)*

**MTH 130 Pre-Calculus Mathematics 4(4-0)**

Functions and their graphs, inequalities, analytic geometry. Satisfies Mathematics Competency. Prerequisite: MTH 107 or 109 or placement.

**MTH 132 Calculus I 4(4-0)**

Limits, continuity, interpretations of the derivative, differentiation of elementary functions, applications of derivatives, antiderivatives, Riemann sums, definite integrals, fundamental theorem of calculus. Satisfies Mathematics Competency. Prerequisites: MTH 107, 109; or MTH 130; or placement. (University Program Group II-B: Quantitative and Mathematical Sciences)

**MTH 133 Calculus II 4(4-0)**

Techniques of integration, applications of definite integrals, improper integrals, elementary differential equations, infinite series, Taylor series, and polar coordinates. Satisfies Mathematics Competency. Prerequisite: MTH 132 or placement.

**MTH 150 The Teaching of Counting and Whole Numbers 3(3-0)**

The teaching and learning of counting, whole number representations, and whole number operations while using High Leverage Practices in grades K-6. Admission limited to students pursuing B.S. in Ed., PK-3 or 3-6 major. Prerequisite: C or better in one of: MTH 105, MTH 107, MTH 130, MTH 132. Pre/co-requisite: EDU 107.

**MTH 151 Mathematics for Elementary Teachers I 3(3-0)**

Mathematical background for elementary teachers. Sets, historical and modern numeration systems, operations with natural numbers, rational numbers, elementary number theory. Admission limited to students pursuing a B.S. in Ed., Elementary emphasis. Prerequisite: C or better in one of: MTH 105, 107, 109, 130, 132. Pre/Co-requisite: EDU 107.

**MTH 152 Mathematics for Elementary Teachers II 3(3-0)**

Continuation of MTH 151. Decimals, percent, ratio/proportion, geometry (concepts and measurement), probability, statistics. Prerequisites: MTH 151 with a grade of C or better; one of: MTH 105, 107, 109, 130, 132.

**MTH 175 Discrete Mathematics 3(3-0)**

Topics in discrete mathematics including logic, Boolean Algebra, sequences, mathematical induction, recursion, set theory, relations, combinatorial counting, and graph theory, with applications in computer science. Satisfies Mathematics Competency. Prerequisite: MTH 130 or MTH 132.

**MTH 212QR Games, Science, and Probability 3(2-2)**

*Introduction to elementary probabilistic concepts by exploring ancient and modern games as they relate to decision making. Simple computations will aid the experimental component. Identical to PHY 212QR and STA 212QR. Credit may not be earned in more than one of these courses. Quantitative Reasoning. Prerequisites: MTH 105 or 107 or 109 or 113 or 130 or 132 or 133. (University Program Group II-B: Quantitative and Mathematical Sciences)*

**MTH 217 Business Calculus 4(4-0)**

Differentiation and integration of algebraic, exponential, and logarithmic functions, business and economics applications of differentiation and integration. Satisfies Mathematics Competency. Does not count towards mathematics major or minor. Prerequisite: MTH 107 or placement.

**MTH 223 Linear Algebra and Matrix Theory 3(3-0)**

Systems of linear equations, matrices, determinants, vectors, vector spaces, eigenvalues, linear transformations, applications and numerical methods. Prerequisite: MTH 132.

**MTH 232 Linear Algebra and Differential Equations 3(3-0)**

First and second order differential equations, linear systems, matrices, vector spaces, eigenvalues and eigenvectors, systems of linear differential equations, Laplace transforms. May not be counted towards a major in mathematics. Credit may not be earned in both MTH 223 and MTH 232, or in both MTH 334 and MTH 232. Prerequisite: MTH 133.

**MTH 233 Calculus III 4(4-0)**

Vectors and surfaces in  $R^3$ , vector-valued functions, functions of several variables, partial differentiation and some applications, multiple integrals, vector calculus. Prerequisites: MTH 133. Pre/Co-Requisites: MTH 223 or 232.

**MTH 250 The Teaching of Fractions, Decimals, and Proportional Reasoning 3(3-0)**

The teaching and learning of negative numbers, fractions, decimals, percents, and proportional reasoning while using High Leverage Practices in grades PK-6. Admission limited to students pursuing a B.S. in Ed., Teaching Grades PK-3, Teaching Grades 3-6 major or Teaching Grades PK-6 major. Prerequisites: MTH 150 with a grade of C or better; C or better in one of: MTH 105, MTH 107, MTH 130, MTH 132.

**MTH 254 Probability and Statistics for K-8 Mathematics Teachers 3(3-0)**

Examines applications of statistics, experimental probability, and theoretical probability suitable for teachers. Prerequisite: Signed major or minor in Elementary Mathematics. Pre/Co-requisite: MTH 152.

**MTH 256 Algebraic Modeling and Measurement for K-8 Math Teachers 3(3-0)**

This course examines the concepts of algebraic thinking and measurement, focusing specifically on applications for teachers. Prerequisite: Signed major or minor in Elementary Mathematics. Pre/Co-requisite: MTH 152.

**MTH 260 Number and Algebraic Connections for Secondary Education 3(3-0)**

Examination of issues related to the teaching and learning of number and operation, proportional reasoning, and algebraic concepts using High Leverage Practices in grades 5-12. Prerequisites: MTH 132 with a B- or better; declared a Teaching Mathematics Grades 7-12 minor, a Teaching Mathematics Grades 5-12 major, or a Teaching Mathematics Grades 5-9 minor.

**MTH 261 Algebra for Secondary Teachers 3(3-0)**

Abstract algebraic concepts are explored through a technology-enhanced approach connecting secondary mathematics curricula with undergraduate mathematics and pedagogical content. Prerequisites: MTH 223; signed major or minor in secondary mathematics.

**MTH 265 Measurement and Transformational Geometry in Secondary Education 3(3-0)**

The teaching and learning of measurement and transformational geometry while using High Leverage Practices in grades 5-12. Prerequisite: MTH 260 with a C+ or better; declared a Teaching Mathematics Grades 7-12 minor, a Teaching Mathematics Grades 5-12 major, or a Teaching Mathematics Grades 5-9 minor.

**MTH 296 Special Topics in Mathematics 1-6(Spec)**

Subject matter not included in regular course. May be taken for credit more than once, total credit not to exceed 6 hours. Prerequisite: permission of instructor.

**MTH 321 Elementary Number Theory 3(3-0)**

Divisibility, Euclidean algorithm, prime factorization, congruences, elementary Diophantine equations, and applications to cryptography. Does not count toward a major but may count toward a minor in Mathematics. Prerequisite: MTH 175 or MTH 332.

**MTH 332 Introduction to Mathematical Proof 3(3-0)**

Study of several fundamental concepts in mathematics including logic, set theory, principles of counting, relations and functions, cardinality, and mathematical induction. No credit in MTH 175 after credit is earned in MTH 332. MTH 175 and MTH 332 cannot be taken in the same semester. Prerequisite: MTH 132 and 175; or Pre/Co-requisites: MTH 223 or 232.

**MTH 334 Differential Equations 3(3-0)**

First, second, and higher order differential equations, existence and uniqueness of solutions, Laplace transforms, series solutions, systems of differential equations, numerical methods, and applications. Prerequisites: MTH 133, 223.

**MTH 341 College Geometry 3(3-0)**

An advanced study of Euclidean and Non-Euclidean geometries from an axiomatic and historical standpoint. Prerequisite: MTH 332.

**MTH 350 The Teaching of Patterns, Shapes, Measurement and Data 3(3-0)**

The teaching and learning of attribution: patterns, shapes, measurement, and data while using High Leverage Practices in grades PK-6. Admission limited to students pursuing a B.S. in Ed., Teaching Grades PK – 3, Teaching Grades 3 – 6 major or Teaching Grades PK – 6 major. Prerequisites: MTH 250 with a grade of C or better; C or better in one of: MTH 105, MTH 107, MTH 130, MTH 132.

**MTH 351 Geometry for K-8 Mathematics Teachers 3(3-0)**

This course examines geometry focusing on axiomatic systems with the purpose of developing the ability to create mathematical proofs. Prerequisites: MTH 256; MTH 152 with grade of B or better.

**MTH 360 Statistics and Probability for Secondary Education 3(3-0)**

The teaching and learning of statistics and probability content in grades 5-12, with an emphasis on designing and understanding research and real-world applications in mathematics education. Prerequisites: MTH 265 with a C+ or better; declared a Teaching Mathematics Grades 7-12 minor, a Teaching Mathematics Grades 5-12 major, or a Teaching Mathematics Grades 5-9 minor.

**MTH 362 Problem-Based and Technology Enhanced Geometry for Secondary Teachers 3(3-0)**

Geometry content is explored through a problem-based and technology-enhanced approach connecting secondary mathematics curricula with undergraduate mathematics and pedagogical content. Prerequisites: MTH 332; C+ or better in MTH 261; signed major or minor in secondary mathematics teaching.

**MTH 363 Problem-Based Probability and Statistics for Secondary Teachers 3(3-0)**

Probability and Statistics content are explored through a problem-based and technology-enhanced approach connecting secondary mathematics curricula with undergraduate mathematics and pedagogical content. Prerequisites: MTH 332; C+ or better in MTH 261; signed major or minor in secondary mathematics.

**MTH 397 Independent Study 1-6(Spec)**

The in-depth study of a topic in mathematics under the direction of a faculty member. May be taken for credit more than once, total credit not to exceed six hours. Prerequisite: Permission of instructor.

**MTH 434 Introduction to Partial Differential Equations 3(3-0)**

Basic solution methods including Fourier series, separation of variables, finite difference, and Green's Functions to solve wave, heat, and Poisson equations. Prerequisites: MTH 233, MTH 334.

**MTH 436 Elements of Complex Variables 3(3-0)**

Complex numbers, analytic functions, Laurent series, Cauchy integral formula. Prerequisites: MTH 233, 332.

**MTH 438 Numerical Analysis I 3(3-0)**

Computational methods for solving non-linear equations and systems of linear equations. Interpolation, numerical differentiation and integration, numerical methods for ordinary differential equations. Prerequisites: MTH 133, 223 or 232.

**MTH 439 Numerical Analysis II 3(3-0)**

Continuation of MTH 438. Approximation theory, iterative techniques in matrix algebra, eigenvalue approximation, numerical solutions of nonlinear systems, boundary-value problems, and partial differential equations. Prerequisite: MTH 438.

**MTH 460 Capstone on Teaching and Learning Mathematics for Secondary Education 4(Spec)**

Planning and implementing effective mathematics instruction for grades 5-12, including facilitating discourse, assessing student thinking, professional development, and connections between mathematics and the curriculum. Prerequisites: MTH 360 with a C+ or better; declared a Teaching Mathematics Grades 7-12 minor, a Teaching Mathematics Grades 5-12 major, or a Teaching Mathematics Grades 5-9 minor.

**MTH 462 Capstone on Teaching and Learning Mathematics for Secondary Teachers 3(3-0)**

This course exposes pre-service secondary mathematics teachers to theory and practice of curriculum, assessment and instruction in schools, introducing current literature and designing instructional units. Prerequisites: MTH 341; C+ or better in MTH 261, 362, 363; signed major or minor in secondary mathematics.

**MTH 492 Seminar in the Solution of Putnam Problems 1-4(Spec)**

Problem-solving techniques demonstrated through solutions of Putnam Examination problems. Designed particularly for those students interested in taking the Putnam Examination. Repeatable up to 4 hours. Prerequisites: MTH 233; permission of instructor.

**MTH 496 Special Topics in Mathematics 1-6(Spec)**

Subject matter not included in regular course. May be taken more than once, total credit not to exceed 6 hours. Prerequisite: Permission of instructor.

**MTH 498 Mathematics Research Project 3(3-0)**

Introduction to research experience in Mathematics. Research must be supervised by a Mathematics faculty member. CR/NC only. Prerequisites: Completion of at least 30 credit hours in mathematics and permission of project advisor.

**MTH 499 Capstone Course in Mathematics 3(3-0)**

Material in core mathematics courses is unified through study of subject matter excluded from regular mathematics courses, in the areas of classical and applied mathematics. Prerequisites: MTH 233. Pre/Co-requisite: One of MTH 523, 532, 545.

**MTH 520 Optimization Theory 3(3-0)**

An introduction to the theory, practical applications, and algorithms of linear programming and nonlinear programming. Prerequisites: MTH 233 or graduate standing.

**MTH 521 Number Theory 3(3-0)**

Properties of integers, divisibility, the Euclidean algorithm, distribution of primes, congruences, arithmetic functions, quadratic reciprocity. Prerequisite: MTH 523 or graduate standing.

**MTH 523 Abstract Algebra 3(3-0)**

Groups, rings, integral domains, fields, and fundamental homomorphism theorems. Prerequisite: MTH 332 or graduate status.

**MTH 525 Advanced Linear Algebra 3(3-0)**

Vector spaces, subspaces, bases and dimensions; linear transformations, their algebra, their representation by matrices, and linear functionals; eigenvalues, triangularizable and diagonalizable transformations; inner product spaces. Prerequisite: MTH 523 or graduate status.

**MTH 527 Representation Theory of the Symmetric Group 3(3-0)**

Representation theory of finite groups, Specht modules, combinatorics of Young tableaux, and symmetric functions. Prerequisite: MTH 525.

**MTH 532 Advanced Calculus I 3(3-0)**

Rigorous development of calculus for functions of one variable. The real number system, sequences, limits, continuity, differentiation, integration, exponential and logarithmic functions, series, uniform convergence. Credits will not count towards MA or Ph.D. degree requirements in mathematics. Prerequisites: MTH 233, 332; or graduate status.

**MTH 533 Advanced Calculus II 3(3-0)**

Continuation of MTH 532. Rigorous development of calculus of several variables. Limits, continuity, differentiation, integration, implicit and inverse function theorems, differential forms. Prerequisite: MTH 532.

**MTH 534 Applied Mathematics and Differential Equations 3(3-0)**

High order equations, series solutions, Bessel functions, nonlinear differential equations, stability, introduction to partial differential equations, boundary value problems, Sturm-Liouville theory, applications to physical/engineering sciences. Prerequisites: MTH 233, 334; or graduate standing.

**MTH 543 Curves and Surfaces 3(3-0)**

Differential geometry of curves and surfaces. Curvature, maps between surfaces, vector fields and differential forms, Stokes' theorem, Euler characteristic, Gauss-Bonnet theorem. Prerequisites: MTH 233, 332; or admission to graduate program in Mathematics. Recommended: MTH 532.

**MTH 545 Introduction to Point-Set Topology 3(3-0)**

Sets, functions, metric spaces, topological spaces, homeomorphisms, compactness and connectedness, quotient spaces. Prerequisite: MTH 332 or graduate status.

**MTH 551 Mathematical Structures for K-8 Mathematics Teachers 3(3-0)**

Problem-solving, set theory, logic, number theory, algebra, consumer mathematics and mathematical systems. Credit will not apply toward a master's degree in mathematics. Prerequisites: MTH 254 and 351.

**MTH 553 History of Elementary Mathematics for K-8 Teachers 3(3-0)**

History of mathematical developments of western and non-western cultures for use in grades K-8. Credit will not apply toward a master's degree in mathematics. Prerequisites: MTH 254, 351.

**MTH 558 Mathematics in Popular Culture 3(3-0)**

This course explores how popular culture (such as television, comics, movies, music and books) portrays mathematicians and mathematics as a discipline. This course is intended for elementary education mathematics majors and minors or in-service teachers. Prerequisite: MTH 256.

**MTH 573 History of Mathematics 3(3-0)**

Survey of the history of mathematics, focusing on topics taught in secondary schools and undergraduate courses. Emphasis on representing diverse mathematics traditions and legacies. Prerequisite: MTH 332 or graduate standing.

**MTH 578 Combinatorics and Graph Theory 3(3-0)**

Introduction to enumerative combinatorics and graph theory. Topics include the graphs, networks and flows, partially ordered sets, principle of inclusion-exclusion, generating functions, and partitions. Prerequisites: MTH 523.

**MTH 586 Operations Research I 3(3-0)**

Theory and application of linear programming and mathematical programming. Simplex method, duality theory and sensitivity analysis, interior point algorithm, and mathematical programming problems. Prerequisite: MTH 233 or graduate standing.

**MTH 596 Special Topics in Mathematics 1-6(Spec)**

Subject matter not included in regular course. May be taken for credit more than once, total credit not to exceed 6 hours. Prerequisite: Permission of instructor.

**MTH 597 Independent Study 1-6(Spec)**

The in-depth study of a topic in mathematics under the direction of a faculty member. Prerequisite: Permission of instructor.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**MTH 619 Continuing Registration for Final Research Project 1(1-0)****MTH 623 Theory of Groups and Rings 3(3-0)****MTH 625 Theory of Modules and Fields 3(3-0)****MTH 627 Representation Theory of Lie Algebras 3(3-0)****MTH 632 Introduction to Real Analysis and Its Applications 3(3-0)****MTH 633 Real Variables 3(3-0)****MTH 634 Fourier Analysis 3(3-0)****MTH 636 Introduction to Complex Variables 3(3-0)****MTH 637 Complex Variable Theory 3(3-0)****MTH 638 Theoretical Numerical Analysis 3(3-0)****MTH 643 Differentiable Manifolds 3(3-0)****MTH 645 Algebraic Topology 3(3-0)****MTH 693 Graduate Seminar in Mathematics and Its Applications 1-4(Spec)****MTH 695 Special Topics in Mathematics Education 1-6(Spec)****MTH 696 Special Topics in Mathematics 1-6(Spec)****MTH 697 Independent Study 1-9(Spec)****MTH 698 Plan B Project 1-2(Spec)****MTH 725 Topics in Algebra 3-9(Spec)****MTH 730 Topics in Applied Mathematics 3-9(Spec)****MTH 732 Functional Analysis 3(3-0)****MTH 734 Partial Differential Equations and Applications 3(3-0)****MTH 737 Topics in Analysis 3-9(Spec)****MTH 744 Topics in Geometry 3-9(Spec)****MTH 761 Methods for Teaching College Mathematics 3(3-0)****MTH 762 A Survey of Research in Collegiate Mathematics Education 3(3-0)****MTH 763 Advanced Perspectives in Collegiate Mathematics Education 3(3-0)****MTH 764 Qualitative Research Methods in Mathematics Education 3(3-0)****MTH 766 Internship: College Teaching 3-6(Spec)****MTH 767 Seminar in Collegiate Mathematics Education I 3(3-0)****MTH 768 Seminar in Collegiate Mathematics Education II 3(3-0)****MTH 795 Advanced Practicum/Internship 3-6(Spec)****MTH 796 Special Topics in Mathematics 1-6(Spec)****MTH 797 Independent Study 1-9(Spec)****MTH 798 Thesis 1-6(Spec)****MTH 898 Dissertation 1-30(Spec)**

## MUS - Music

*See the School of Music for more information.*

### School of Music Course Numbering

Course numbers are coded according to content. The middle digit of the number indicates content as follows:

Course Content	Middle Digit
Theory and Composition	0
Music History and Literature	1
Pedagogy	3
Class Applied Instruction	4
Private Applied Instruction	5, 6, 7
Ensembles	8
Research and Special Studies	9

**MUS 097 Recital Attendance 0(0-0)**

Attendance at recitals and concerts in the School of Music. B.M. and B.M.E. students are required to register for and complete seven (7)

semesters of MUS 097. B.A. and B.S. music students are required to register for and complete four (4) semesters of MUS 097. CR/NC only. Prerequisite: Admission to the School of Music.

**MUS 101 Fundamentals of Music Theory 4(3-2)**

An introduction to music theory fundamentals. The first module in the music theory core sequence.

**MUS 102 Theory and Analysis of Popular Music 4(3-2)**

Introduction to the harmonic, contrapuntal, rhythmic, timbral, and formal aspects of various kinds of Western popular music including blues, jazz, folk, rock, and pop. Prerequisites: MUS 101 with a grade of C or better.

**MUS 103 Sight Singing and Ear Training I 1(0-2)**

Basic aural and vocal training in the melodic, harmonic, and rhythmic elements of music. Prerequisite: Admission to the School of Music.

**MUS 104 Sight Singing and Ear Training II 1(0-2)**

Continuation of MUS 103 (Sight Singing and Ear Training I). Prerequisites: Admission to the School of Music; MUS 103 with a C or better.

**MUS 105 Supplemental Theory 2(0-2)**

This course reinforces concepts taught in MUS 101. Prerequisite: Admission to the School of Music. Co-requisite: MUS 101.

**MUS 107 The Craft of Composition 2(2-0)**

An exploratory course in the craft of composing music. Prerequisite: MUS 101 or 206.

**MUS 109 Introduction to Music Technology 1(1-1)**

A hands-on introduction to the use of computers, software, synthesizers, and related equipment as they relate to music and music education. Prerequisite: Admission to the School of Music.

**MUS 110 Music in Society 3(3-0)**

*An intercultural and interdisciplinary exploration of the elements of music. (Not open to music majors.) (University Program Group I-B: The Arts)*

**MUS 114 Listening Experience: Expand Your Playlist 3(3-0)**

*Objectives are to explore a variety of musical experiences, to develop musical intelligence, and to increase musical discrimination in a variety of musical genres. May be offered as Writing Intensive. (University Program Group I-B: The Arts)*

**MUS 115 Music of the Caribbean: Salsa to Reggae 3(3-0)**

*This course is an exploration of the culture of the Caribbean through the lens of its music. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**MUS 116 Music and Cartoons: Warner Brothers to Disney 3(3-0)**

*Experience how music is used in cartoons, how the music can sharpen perception, and how music can affect how we view animated material. (University Program Group I-B: The Arts)*

**MUS 141 Vocal Techniques I 1(0-2)**

Study and practice of basic techniques necessary to improve the singing voice (i.e. posture, breathing habits, tone, diction). Prerequisite: Admission to the School of Music.

**MUS 142 Vocal Techniques II 1(0-2)**

Continuation of work begun in MUS 141. Prerequisites: Admission to the School of Music; MUS 141 with a C or better.

**MUS 144 Woodwind Techniques 2(0-4)**

Flute, clarinet, and saxophone playing and teaching techniques. Prerequisite: Admission to the School of Music.

**MUS 146 Brass Techniques 2(0-4)**

Trumpet, Horn, Trombone, Euphonium-Baritone, and Tuba performing and teaching techniques. Prerequisite: Admission to the School of Music.

**MUS 147 Piano Class I 1(0-2)**

This course is designed to develop functional piano skills, such as sight reading, harmonization, basic repertoire, and technique appropriate to the level. Prerequisite: Admission to the School of Music; or signed Music Theatre Major.

**MUS 148 Piano Class II 1(0-2)**

This course is designed to continue the development of functional piano skills, such as sight reading, harmonization, basic repertoire, and technique. Prerequisites: Admission to the School of Music; or signed Music Theatre Major, MUS 147 with a C or better.

**MUS 149 Class Guitar 1(0-2)**

Group guitar instruction for non-music and music majors on correct technique, playing and reading chords, melodies, and standard works written for guitar.

**MUS 150 Voice 1-12(Spec)**

Individualized program of applied studio instruction in voice performance focusing on the foundations of technique, musicianship, literature, and performance practice. This course is repeatable and intended as a two-semester foundation and pre-requisite for study at the 200-level. Prerequisite: Admission to the School of Music or Music Theater Program.

**MUS 151 Organ 1-12(Spec)**

Individualized program of applied studio instruction in organ performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.



**MUS 152 Piano 1-12(Spec)**

Individualized program of applied studio instruction in piano performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 153 Violin 1-12(Spec)**

Individualized program of applied studio instruction in violin performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 154 Viola 1-12(Spec)**

Individualized program of applied studio instruction in viola performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 155 Violoncello 1-12(Spec)**

Individualized program of applied studio instruction in violoncello performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 157 String Bass 1-12(Spec)**

Individualized program of applied studio instruction in string bass performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 158 Composition 1-12(Spec)**

Applied study of music composition. The course is repeatable and intended as the foundation for advanced study at the 300-level. Prerequisites: Admission to the School of Music.

**MUS 159 Guitar 1-8(Spec)**

Individualized program of applied studio instruction in guitar performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite(s): Admission to the School of Music.

**MUS 161 Flute 1-12(Spec)**

Individualized program of applied studio instruction in flute performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 163 Oboe 1-12(Spec)**

Individualized program of applied studio instruction in oboe performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 165 Clarinet 1-12(Spec)**

Individualized program of applied studio instruction in clarinet performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 167 Bassoon 1-12(Spec)**

Individualized program of applied studio instruction in bassoon performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 169 Saxophone 1-12(Spec)**

Individualized program of applied studio instruction in saxophone performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 171 Trumpet 1-12(Spec)**

Individualized program of applied studio instruction in trumpet performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 173 Horn 1-12(Spec)**

Individualized program of applied studio instruction in horn performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 175 Trombone 1-12(Spec)**

Individualized program of applied studio instruction in trombone performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 177 Euphonium 1-12(Spec)**

Individualized program of applied studio instruction in euphonium performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 178 Tuba 1-12(Spec)**

Individualized program of applied studio instruction in tuba performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 179 Percussion 1-12(Spec)**

Individualized program of applied studio instruction in percussion performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

**MUS 180 Festival Chorus 1-8(Spec)**

Preparation and performance of major choral/orchestral compositions. No audition required.

**MUS 181 Men's Chorus 1-8(Spec)**

Preparation and performance of choral works for the male voice. Open by audition to any student in the University.

**MUS 182 Women's Chorus 1-8(Spec)**

Preparation and performance of choral works for the female voice. Open by audition to any student in the University.

**MUS 183 Concert Choir 1-8(Spec)**

Preparation and performance of choral works. Open by audition to any student in the University.

**MUS 185 Orchestra 1-8(Spec)**

The rehearsal and performance of orchestral literature. Open by audition to any student in the University.

**MUS 186 Band 1-8(Spec)**

Preparation and performance of instrumental works. Open by audition to any student in the University.

**MUS 187 String Orchestra 1-8(Spec)**

The rehearsal and performance of string orchestral literature. Open by audition to any student in the University.

**MUS 188 Men's Barbershop 1-8(Spec)**

Preparation and performance of barbershop works for the male voice. Open by audition.

**MUS 189 Introduction to Accompanying 1(0-2)**

Experience in accompanying vocal and instrumental music. Prerequisite: Admission to the School of Music.

**MUS 191 Performance Anxiety Management 2(2-0)**

Introduction to cognitive and physical methods, techniques, and exercises to manage performance anxiety symptoms.

**MUS 197 Special Topics 1-6(Spec)**

Exploration of special topics in the field of Music. This course may be repeated when content does not duplicate previous special topic studies. Prerequisite: Admission to the School of Music.

**MUS 201 Tonality in the Common Practice Period 4(3-2)**

This course focuses on the essential patterns of functional harmony found during the Common Practice Period (1600-1900) of Western classical music. Prerequisites: MUS 101 with a grade of C or better.

**MUS 202 Post-Tonal Music Analysis 4(3-2)**

This course focuses on post-tonal pitch relationships and rhythmic transformations found in Western classical music during the 20th and 21st centuries. Prerequisite: MUS 101 with a C or better.

**MUS 203 Sight Singing and Ear Training III 1(0-2)**

Continuation of MUS 104. Prerequisites: Admission to the School of Music; MUS 104 with a C or better.

**MUS 204 Sight Singing and Ear Training IV 1(0-2)**

Continuation of MUS 203. Prerequisites: Admission to the School of Music; MUS 203 with a C or better.

**MUS 206 Understanding Musical Composition 3(3-0)**

Develop basic theory skills in notation, sight-singing, listening, composition, and the aesthetic appreciation of music in Western culture. Not open to music majors.

**MUS 209 Digital Music Production 3(3-0)**

This course teaches essential technical skills necessary in composing, recording, and producing music using contemporary hardware and software.

**MUS 211 Historical Survey of Music I 3(3-0)**

Western music history from ancient times through the classical era. Includes an introduction to the music of selected non-Western cultures. Prerequisites: Admission to the School of Music; MUS 101 with a C or better.



**MUS 212 Historical Survey of Music II 3(3-0)**

Continuation of the work begun in MUS 211. Western music history from the Baroque through early Romanticism (c. 1700-1850). Prerequisite: MUS 211 with a C or better.

**MUS 213 Jazz: An American Art Form 3(3-0)**

*A music literature course reviewing important trends and styles in the history of jazz. Open to all students. May be offered as Writing Intensive. (University Program Group I-B: The Arts)*

**MUS 230 Introduction to Music Education 2(2-0)**

An overview of the field of music education including roles, philosophies, methods, curriculum, specializations, organizations, and resources. Prerequisite: Admission to the School of Music.

**MUS 236 Piano Pedagogy I 2(2-0)**

Introduction to elementary piano teaching methods and materials, including repertoire, sight-reading, technique, duets, and theory. Prerequisites: Admission to the School of Music; two semesters of MUS 151 or 152.

**MUS 237 Piano Pedagogy II 2(2-0)**

Continuation of Piano Pedagogy I with emphasis on the intermediate pianist and teaching materials for that level. Prerequisite: MUS 236.

**MUS 241 Diction for Singers I 2(1-2)**

Introduction to English and Italian diction. Study of the International Phonetic Alphabet. Prerequisite: Admission to the School of Music.

**MUS 242 Diction for Singers II 2(1-2)**

Intermediate diction techniques in German and French. Prerequisites: MUS 241 with a grade "C" or better.

**MUS 244 Double Reed Techniques 1(0-2)**

Oboe and bassoon playing and teaching techniques. Prerequisite: MUS 144.

**MUS 246 String Techniques 2(0-4)**

Teaching techniques for violin, viola, cello, and double bass. Prerequisite: Admission to the School of Music.

**MUS 247 Piano Class III 1(0-2)**

This course is designed to continue the development of functional piano skills, such as sight reading, harmonization, transposition, basic repertoire, and technique. Prerequisites: Admission to the School of Music, MUS 148 with a C or better.

**MUS 248 Piano Class IV 1(0-2)**

This course is designed to develop functional piano skills, such as sight reading, harmonization, basic repertoire, and technique appropriate to the level. Prerequisites: Admission to the School of Music, MUS 247 with a C or better.

**MUS 249 Functional Piano 1(0-2)**

Development of skills in harmonization, improvisation, transposition, and score reading for intermediate and advanced piano and organ students. Prerequisites: Admission to the School of Music, MUS 248 with a C or better. Pre/Co-requisites: MUS 151 or 152.

**MUS 250 Voice 1-12(Spec)**

Individualized program of applied studio instruction in voice performance. Building technique, musicianship, literature, and performance practice studied in MUS 150. This course is repeatable and intended as a two-semester foundation and pre-requisite for study at the 300-level. Prerequisites: Admission to the School of Music or Music Theater Program; Successful completion of a 200-level performance jury.

**MUS 252 Jazz Piano 1-8(Spec)**

Individual instruction in jazz piano performance. Prerequisite: Admission to the School of Music.

**MUS 280 Introduction to Conducting 2(0-4)**

Development of the physical and musical skills needed by a conductor. Prerequisites: Admission to the School of Music; MUS 202, 204.

**MUS 281 Chamber Ensemble 1-8(Spec)**

Chamber ensemble rehearsal and performance. Prerequisite: Admission to the School of Music.

**MUS 282 Chamber Singers 1-8(Spec)**

Preparation and performance of vocal chamber music from Medieval to contemporary with a focus on a cappella music. Open by audition to any student in the University.

**MUS 284 Techniques for the Singing Actor 1-6(Spec)**

Preparation and performance of solo roles in scenes from standard operas, chamber operas, and/or musical theatre. Prerequisite: Admission to the School of Music or signed Music Theatre major.

**MUS 285 Percussion Ensemble 1-8(Spec)**

Preparation and performance of percussion ensemble works. Open by audition to any student in the University.

**MUS 286 Jazz Ensemble 1-8(Spec)**

Jazz ensemble rehearsal and performance. Prerequisite: Open by audition to any student in the University.

**MUS 297 Special Topics 1-6(Spec)**

Exploration of special topics in the field of Music. This course may be repeated when content does not duplicate previous special topic studies. Prerequisite: Admission to the School of Music.

**MUS 302 Contrapuntal Techniques 3(3-0)**

A study of contrapuntal techniques. Prerequisites: admission to Music candidacy; MUS 201.

**MUS 303 Form and Analysis 3(3-0)**

Study and analysis of large-scale musical forms found in Western classical music from 1600 – present. Prerequisite: MUS 102 or 201 with a C or better.

**MUS 304 Instrumentation and Scoring 3(2-2)**

Study of the ranges, transpositions, timbral combinations, and tessitura strengths/weaknesses of orchestral and band instruments with practical application of scoring preexisting music. Prerequisites: Admission to Music candidacy; MUS 201.

**MUS 305 Choral Arranging 3(3-0)**

A study of arranging pre-existing music for various combinations of voices and voice types. Prerequisite: MUS 102 or 201.

**MUS 306 Songwriting I 3(3-0)**

An introduction to the basic harmonic, melodic, lyrical, and formal elements of songwriting. Prerequisite: MUS 102.

**MUS 309 Electroacoustic Music 3(3-0)**

This course covers the technology, techniques, and literature associated with experimental electroacoustic music genres. Prerequisites: MUS 109 or MUS 209.

**MUS 310 Music and the Mind 3(3-0)**

*An exploration of the various brain systems that are engaged by different musical styles and activities. May be offered as Writing Intensive. Recommended: 56 credit hours completed. (University Program Group I-B: The Arts)*

**MUS 311 Historical Survey of Music II 3(3-0)**

Continuation of the work begun in MUS 211. Western music history from early romanticism to the present. May be offered as Writing Intensive. Prerequisites: MUS 211 with a C or better; Admission to music candidacy.

**MUS 313 Musics of the World 3(3-0)**

*An introduction to musical systems of major non-Western cultures and folk and traditional music of Western continents. May be offered as Writing Intensive. Recommended: 56 credit hours. (University Program Group I-B: The Arts)*

**MUS 314WI History of Symphonic Literature 3(3-0)**

Development of the symphony orchestra and changing styles and trends of its literature. Writing Intensive. Prerequisites: MUS 202, 204, 212; Admission to Music Candidacy.

**MUS 316 History and Literature of the Organ 2(2-0)**

Study of the various composers and literature for the organ and the various periods and schools of organ building. Prerequisite: Admission to Music Candidacy.

**MUS 317 Song Repertoire for Young Voices 2(2-0)**

Study of solo vocal literature and materials suited for students at the secondary level. Prerequisite: Admission to Music Candidacy. Recommended: MUS 338.

**MUS 319 Racism and Discrimination in Jazz History 3(3-0)**

*Jazz history is rife with stories of racial and gender discrimination. This class will investigate these issues through jazz and American culture. May be offered as Writing Intensive. Recommended: 28 credit hours. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)*

**MUS 330 Music for Elementary Classroom Teachers 2(1-2)**

Fundamentals and methods of music for cross-curricular, whole-child learning, development, and assessment in the elementary classroom. Prerequisite: EDU 107.

**MUS 331 Instrumental Organization 2(2-0)**

Includes all phases of instrumental organization and administration in the elementary, junior high, and senior high school. Prerequisites: admission to Music candidacy; MUS 230.

**MUS 333 Music Education in the Elementary Grades 2(2-0)**

Topics include objectives and instructional strategies for development of basic music concepts and skills in elementary classroom music. Prerequisite: admission to Music candidacy; MUS 230.

**MUS 335 Instrumental Pedagogy 2(2-0)**

Instrumental pedagogy and practicum for the student's major instrument on the Bachelor of Music degree: Orchestral Instrumental concentration. Prerequisite: admission to Music candidacy.

**MUS 338 Voice Pedagogy 2(1-2)**

Problems, procedures, teaching lab and materials for teaching correct vocal production. Prerequisite: Admission to Music Candidacy.

**MUS 339 Piano Pedagogy Practicum 1(1-1)**

Supervised experience in teaching piano at the precollege and college levels in both the private and group settings. Prerequisite: admission to Music candidacy; MUS 237.

**MUS 344 Percussion Techniques 2(0-4)**

Teaching techniques for percussion. Prerequisites: admission to Music candidacy.

**MUS 350 Voice 1-16(Spec)**

Individualized program of applied studio instruction in voice performance focusing on advanced technique, musicianship, literature, and performance practice. This course is repeatable and intended as a two-semester foundation and pre-requisite for study at the 400-level or as a four-semester finalization of voice studies at the undergraduate level. Prerequisites: Admission to the School of Music or Music Theater Program; Successful completion of a 300-level performance jury.

**MUS 351 Organ 1-16(Spec)**

Individualized program of applied studio instruction in organ performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 352 Piano 1-16(Spec)**

Individualized program of applied studio instruction in piano performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 353 Violin 1-16(Spec)**

Individualized program of applied studio instruction in violin performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; successful completion of a 300-level performance jury.

**MUS 354 Viola 1-16(Spec)**

Individualized program of applied studio instruction in viola performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; successful completion of a 300-level performance jury.

**MUS 355 Violoncello 1-16(Spec)**

Individualized program of applied studio instruction in violoncello performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; successful completion of a 300-level performance jury.

**MUS 357 String Bass 1-16(Spec)**

Individualized program of applied studio instruction in string bass performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 700-level. Prerequisites: Admission to the School of Music; successful completion of a 300-level performance jury.

**MUS 358 Composition 2-8(Spec)**

Advanced applied study of music composition. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; MUS 158; Successful completion of a composition jury.

**MUS 359 Guitar 1-8(Spec)**

Individualized program of applied studio instruction in guitar performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation for professional study. Prerequisites: Admission to the School of Music, successful completion of a 300-level performance jury.

**MUS 360 Harpsichord 1-8(Spec)**

Individualized program of applied studio instruction in harpsichord performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable. Prerequisites: Admission to Music Candidacy; successful completion of a 300-level performance jury.

**MUS 361 Flute 1-16(Spec)**

Individualized program of applied studio instruction in flute performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music, successful completion of a 300-level performance jury.

**MUS 363 Oboe 1-16(Spec)**

Individualized program of applied studio instruction in oboe performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 365 Clarinet 1-16(Spec)**

Individualized program of applied studio instruction in clarinet performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 367 Bassoon 1-16(Spec)**

Individualized program of applied studio instruction in bassoon performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 369 Saxophone 1-16(Spec)**

Individualized program of applied studio instruction in saxophone performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 371 Trumpet 1-16(Spec)**

Individualized program of applied studio instruction in trumpet performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 373 Horn 1-16(Spec)**

Individualized program of applied studio instruction in horn performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; successful completion of a 300-level performance jury.

**MUS 375 Trombone 1-16(Spec)**

Individualized program of applied studio instruction in trombone performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 377 Euphonium 1-16(Spec)**

Individualized program of applied studio instruction in euphonium performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; successful completion of a 300-level performance jury.

**MUS 378 Tuba 1-16(Spec)**

Individualized program of applied studio instruction in tuba performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 379 Percussion 1-16(Spec)**

Individualized program of applied studio instruction in percussion performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

**MUS 381 Choral Conducting and Materials 2(0-4)**

The study of advanced conducting techniques specific to choral ensembles. The course will focus on rehearsal methods, vocal techniques, music selection and score analysis. Prerequisites: MUS 280, Admission to Music Candidacy.

**MUS 382 Advanced Instrumental Conducting 2(0-4)**

Principles and performance of instrumental conducting. Prerequisites: MUS 280 with a grade of C or better; Admission to Music candidacy.

**MUS 389 Service Playing 2(2-0)**

Covers various worship services, liturgies, and hymn playing. Prerequisites: Admission to Music Candidacy; Successful completion of 300-level organ jury.

**MUS 397 Special Topics 1-6(Spec)**

Exploration of special topics in the field of Music. This course may be repeated when content does not duplicate previous special topic studies. Prerequisite: Admission to Music Candidacy.

**MUS 406 Songwriting II 3(3-0)**

An immersive investigation into writing songs in specific musical genres. Prerequisite: MUS 306.

**MUS 413 History and Literature of Church Music 2(2-0)**

A study of church music in Europe and the United States. Prerequisite: admission to Music candidacy; MUS 311.

**MUS 431 Instrumental Classroom and Rehearsal Methods 2(2-1)**

Methods and materials for teaching instrumental music, grades 5-12. Topics include sequential curriculum development, standards-based rehearsal design, and teaching in a heterogeneous setting. Includes pre-student teaching field experience. Prerequisites: MUS 230; Admission to Music Candidacy, Tier Two: Admission of Candidacy to Teacher Education. Co-requisite: TEPD Pre-student teaching field experience. Recommended: MUS 144, 146, 244, 246, 344.

**MUS 433 Secondary Choral & General Music Methods 3(3-0)**

Principles, concepts, materials, and methods of a comprehensive secondary school choral and general music program. Prerequisites: MUS 280, 333; Admission to Music Candidacy; Tier Two: Admission of Candidacy to Teacher Education.

**MUS 450 Voice 1-8(Spec)**

Individualized program of applied studio instruction in voice performance expanding on advanced technique, musicianship, literature, and performance practice. This course is repeatable and intended as a two-semester foundation and pre-requisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 400-level performance jury.

**MUS 490 Independent Study 1-12(Spec)**

Student-initiated study guided by faculty member or faculty committee. This course is repeatable up to 12 hours when content does not duplicate previous independent studies. Prerequisite: Music Candidacy.

**MUS 503 Advanced Counterpoint 2(2-0)**

Advanced contrapuntal techniques and writing assignments in 18th century style. Prerequisites: MUS 302; Music candidacy; or admission to the graduate music program.

**MUS 504 Seminar in Compositional Techniques 3-9(Spec)**

Exploration and application of significant compositional trends and techniques. Repeatable up to nine hours when content previously studied is not duplicated. Prerequisites: MUS 202 and Music candidacy; or admission to the graduate music program.

**MUS 505 Seminar in Contemporary Music Analysis 3(3-0)**

Analysis of selected contemporary compositions. Prerequisites: Music Candidacy, MUS 202; or admission to the graduate music program.

**MUS 506 Advanced Scoring 3(3-0)**

Scoring for orchestra and chamber orchestra. Prerequisite: MUS 304 or graduate standing in Music program.

**MUS 507 Music Theory Pedagogy 3(3-0)**

Pedagogical methods and materials for teaching music theory and aural skills. Prerequisites: MUS 202, 204, music candidacy; or admission to the graduate music program.

**MUS 511 Choral Literature I 2(2-0)**

Detailed study of choral forms of the Renaissance and Baroque eras. Prerequisites: Admission to Music Candidacy or Admission to the Graduate Music Program.

**MUS 512 Choral Literature II (Since 1750) 2(2-0)**

Representative small choral forms suitable for secondary school. Special attention to style characteristics which contribute to interpretive techniques. Prerequisites: Admission to Music Candidacy or Admission to the Graduate Music Program.

**MUS 514 Survey of Piano Literature 3(3-0)**

Survey of piano literature from the Baroque period to modern times. Prerequisites: Music Candidacy or admission to the graduate music program.

**MUS 515 History of Opera 3(3-0)**

A survey of operatic literature from the Baroque to modern eras. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

**MUS 516 Seminar in Piano Music 3-9(Spec)**

Critical examination of the piano works of a selected composer, focusing on stylistic contributions to musical forms and genres. Repeatable up to nine hours when content previously studied is not duplicated. Prerequisites: Music Candidacy or admission to the graduate music program; MUS 514.

**MUS 518 Song Repertoire 2(1-2)**

A survey of art song repertoire. Prerequisites: Music Candidacy or admission to the graduate music program.

**MUS 520 Jazz Arranging 3(3-0)**

The study of basic arranging techniques used in writing music for small and large jazz ensembles. Prerequisite: Admission to Music candidacy or admission to the graduate music program.

**MUS 521 Advanced Jazz Arranging 3(3-0)**

The study of modern advanced arranging techniques used in writing music for large jazz ensembles. Prerequisite: Admission to Music candidacy or admission to the graduate music program; MUS 520.

**MUS 531 Orff Techniques 2(1-2)**

Philosophy, techniques, and pedagogy of the Orff-Schulwerk approach to music education. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

**MUS 532 Dalcroze Eurhythmics 2(1-2)**

Introduction to the music education philosophy and approach of Emile Jacques-Dalcroze. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

**MUS 533 Kodály Pedagogy 2(1-2)**

Philosophy, materials, and pedagogy of the Kodály method of music education. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

**MUS 534 Music for Pre-School Children 2(2-0)**

Musical activities for the preschool child designed to nurture musical potential and promote musical awareness. Prerequisite: Junior status or above; or graduate status.

**MUS 535 Workshop in Music Education 1-4(Spec)**

Practical applications of selected music education trends, techniques, or methodologies. Repeatable up to four hours when content previously studied is not duplicated. Prerequisites: Music Candidacy or admission to the graduate music program.

**MUS 540 Organ Pedagogy Practicum 2(Spec)**

Supervised experience in teaching the organ. Prerequisites: Admission to Music Candidacy, MUS 351; or admission to the graduate music program.

**MUS 552 Jazz Piano 1-8(Spec)**

Individual instruction in jazz piano performance. May be taken more than once, for 1-2 credits per enrollment, not to exceed eight credits. Prerequisites: Music Candidacy or admission to the graduate music program.

**MUS 581 Jazz Improvisation Laboratory 2(1-2)**

Advanced improvisation and ensemble leadership skills in a laboratory setting. This course is repeatable up to 4 credits. Prerequisites: Music Candidacy; or admission to the Graduate Music Program.

**MUS 597 Special Topics 1-6(Spec)**

This course is repeatable. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**MUS 607 Music Technology Seminar 3(3-0)****MUS 619 Continuing Registration for Final Research Project 1(1-0)****MUS 620 Jazz Harmony and Analysis 3(3-0)****MUS 621 Jazz Improvisation Pedagogy and Practicum 2(1-2)****MUS 622 Modern Jazz History 3(3-0)****MUS 624 Jazz Pedagogy 3(2-2)****MUS 631 Advanced Piano Pedagogy I 3(3-0)****MUS 632 Advanced Piano Pedagogy II 3(3-0)****MUS 633 Class Piano Pedagogy 3(3-0)****MUS 634 Piano Pedagogy Practicum 3(2-2)****MUS 670 Elective Applied Instruction 1-8(Spec)****MUS 701 Composition 2-8(Spec)****MUS 707 Analytical Styles I: Medieval-Classical 3(3-0)****MUS 708 Analytical Styles II: 19-21st Century 3(3-0)****MUS 711 Choral Masterworks 3(3-0)****MUS 713 Early Jazz and American Culture through 1945 3(3-0)****MUS 714 Wind Band Literature 3(3-0)****MUS 715 Rock 'n' Roll Seminar 3(3-0)****MUS 717 Historical Topics I: Medieval - Classical 3(3-0)****MUS 718 Historical Topics II: 19-20th Century 3(3-0)****MUS 719 Seminar in World Music 3(3-0)****MUS 720 Seminar in the Music of a Selected Composer 3-9(Spec)****MUS 731 Curriculum Design in Music Education 3(3-0)****MUS 732 History and Philosophy of Music Education 3(3-0)****MUS 733 Woodwind Pedagogy 3(3-0)****MUS 734 Brass Pedagogy 3(3-0)****MUS 735 Percussion Pedagogy 3(3-0)****MUS 736 String Pedagogy 3(3-0)****MUS 750 Voice 1-8(Spec)****MUS 751 Organ 1-8(Spec)****MUS 752 Piano 1-8(Spec)****MUS 753 Violin and Viola 1-8(Spec)****MUS 754 Viola 1-8(Spec)****MUS 755 Violoncello 1-8(Spec)****MUS 757 String Bass 1-8(Spec)****MUS 760 Harpsichord 1-8(Spec)****MUS 761 Flute 1-8(Spec)****MUS 763 Oboe 1-8(Spec)****MUS 765 Clarinet 1-8(Spec)****MUS 767 Bassoon 1-8(Spec)****MUS 769 Saxophone 1-8(Spec)****MUS 771 Trumpet 1-8(Spec)****MUS 773 Horn 1-8(Spec)****MUS 775 Trombone 1-8(Spec)****MUS 777 Euphonium 1-8(Spec)****MUS 778 Tuba 1-8(Spec)****MUS 779 Percussion 1-8(Spec)****MUS 780 Performance Ensembles 1-8(Spec)****MUS 781 Advanced Choral Conducting 3-6(Spec)****MUS 782 Advanced Instrumental Conducting 3-6(Spec)****MUS 784 Instrumental Rehearsal Techniques 3(3-0)****MUS 790 Independent Study 1-9(Spec)****MUS 791 Introduction to Music Research 3(3-0)****MUS 793 Research Project in Music Education 2(Spec)****MUS 795 Psychology of Music Teaching and Learning 3(3-0)****MUS 797 Special Topics 1-6(Spec)****MUS 798 Thesis 1-6(Spec)****MUS 799 Recital 4(Spec)**



## NDS - Nutrition and Dietetics

See the Department of Rehabilitation and Medical Sciences for more information.

### NDS 160 Introduction to Food and Culinary Techniques 3(2-2)

A systematic explanation of the basic principles and fundamental procedures underlying professional food preparation.

### NDS 210 Sustainable Food Systems 3(2-2)

Introductory exploration of alternative food systems, including culinary sustainability practices. This course may be offered in an online format.

### NDS 261 Foodservice Catering for Events 3(3-0)

A comprehensive study of managing the foodservice component to an event, including the planning, design, and execution of events. Recommended: Math competency completed.

### NDS 263 Beverages in Foodservice 3(3-0)

A comprehensive study covering the knowledge required for tending bar and the management skills necessary to ensure successful and profitable beverage service.

### NDS 271 Food and Culture 3(3-0)

*Introduction to the practices and beliefs related to food and nutrition in major ethnic, religious, and regional groups and societies around the world. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)*

### NDS 291 Introduction to Wine 3(3-0)

This course explores the connection between moderate wine consumption and health. Students will learn about grape varieties, growing wine grapes, winemaking, and sensory evaluation. Prerequisite: Must be 21 years of age by the first day of class.

### NDS 361 Food Science 4(3-2)

Studies the principles of physical and chemical properties of food. Food evaluation, analyses, and processing. Prerequisite: NDS 160; Pre/Co-requisite: CHM 342.

### NDS 364 Food Safety, Sanitation, and Health 3(3-0)

A comprehensive coverage of food protection practices focused on prevention that includes high-risk populations, active managerial control, and crisis management. Prerequisite: NDS 160 or NDS 261 or a signed Environmental Health and Safety major or a signed Marketing and Hospitality Services Administration major.

### NDS 367 Institutional Food Production Laboratory 1(0-2)

Techniques of institutional food preparation and service using a wide variety of equipment. Service to the institution's target population will be emphasized. Prerequisites: NDS 160; Co-requisite: NDS 364.

### NDS 370 Nutrition 3(3-0)

*Principles of normal nutrition as related to the health of all age groups. May be offered as Writing Intensive. (University Program Group II-A: Descriptive Sciences)*

### NDS 371 Nutrition and Women's Health 3(3-0)

Study of women's health concerns and nutritional needs. This course focuses on basics of healthy living and common major conditions that affect women's health. Prerequisite: NDS 370.

### NDS 373 Nutrition for Healthy Living 3(3-0)

Contemporary nutritional issues, fads and myths reviewed under current research. This course focuses on current issues in nutrition research and proposes healthy behavioral lifestyle strategies. Prerequisite: NDS 370.

### NDS 374WI Nutrition in the Life Cycle 3(3-0)

Nutritional needs across the life span. Introduction to nutritional assessment methods, the physiological basis for nutritional recommendations, and evaluation of nutrition-related research. Writing Intensive. Prerequisite: NDS 370; signed Dietetics major.

### NDS 375WI Nutrition and Performance 3(3-0)

Nutrient utilization by athletes and active individuals. Analysis of the interaction among macronutrients, micronutrients, dietary supplements, and fluids for optimal exercise performance. Writing Intensive. Prerequisite: NDS 370.

### NDS 376 Fitness & Wellness Nutrition Practicum 1-6(Spec)

Practical experiences providing faculty-supervised nutrition education for CMU and area communities. This course can be repeated for up to six credits total. CR/NC only. Prerequisite: NDS 374 or 375.

### NDS 377 Nutrition in Disabilities and Disease 3(3-0)

Principles of nutrition as related to individuals with developmental disabilities or disease. Prerequisite: NDS 370.

### NDS 378 Maternal and Infant Nutrition 3(3-0)

This course covers the latest research related to women's nutritional requirements throughout their reproductive years including pre-conceptual, antenatal and postnatal period, and infant nutritional requirements. Prerequisite: NDS 370.

### NDS 379 Nutrition Practicum in a School Setting 1-6(Spec)

Practical experiences providing faculty-supervised nutrition education for students, teachers, caregivers, and administrators in a K-12 school setting. This course can be repeated for up to 6 credits total. CR/NC only. Prerequisite: NDS 370.

### NDS 397 Special Topics in Foods and Nutrition 1-6(Spec)

Topics of special interest which are not normally included in existing courses. This course may be offered in an online format. Prerequisites: See Course Search and Registration.

### NDS 420 Advanced Food Science and Chemistry 3(3-0)

Explains the chemical constituents of food and their relationship to food properties and quality. Discusses major issues in food processing and product development. Prerequisites: NDS 361; CHM 120, 127.

### NDS 451 Food Safety and HACCP 3(3-0)

Studying food safety and microbiology. Developing/implementing Hazard Analysis Critical Control Point (HACCP) plan for food products. Pre/Co-requisites: NDS 364.

### NDS 463 Menu Planning: Design and Service 3(3-0)

Concepts of menu design: copy, layout, types, design, nutrition, construction, pricing techniques and consistency of concept. Service styles and front-of-the-house management presented. Prerequisite: NDS 370.

### NDS 465 Foodservice Facilities Design 3(3-0)

Creating a foodservice facility design including: concept development, market analysis, menu, equipment, building size and space, and marketing the operation to the target market. Prerequisites: NDS 365, 463.

### NDS 467 Quantity Food Purchasing 3(3-0)

Interaction with intermediaries, buying methods, identification and specifications for food and non-food items presented. Prerequisites: NDS 160.

### NDS 468 Foodservice Internship 3(Spec)

An internship of 240 hours in food production. NDS 566 may be a substitution for this course on the Foodservice major for students demonstrating one or more years of qualifying experience. Approval of instructor required. Prerequisites: NDS 365, NDS 366, NDS 465, NDS 467.

### NDS 469 Foodservice Systems Administration 3(3-0)

A study of institutional foodservice systems including recipe analysis, budgeting, procurement, personnel selection and development, leadership, decision-making, marketing, customer satisfaction, and sustainability. Prerequisites: NDS 160, NDS 364; admission into the professional phase of the Dietetics program.

### NDS 470 Applied Nutrition 3(3-0)

A detailed examination of human nutritional needs and how nutritional science can be applied to meet those needs in health and disease. Prerequisites: NDS 370.

### NDS 471 Medical Nutrition Therapy I 3(3-0)

This course addresses the application of medical nutrition therapy in the treatment and management of injury, illness and other disease conditions. Prerequisites: NDS 370, CHM 421 or CHM 521, BIO 392 or HSC 214 and HSC 215; admission to the Professional Phase of the dietetics program. Pre/Co-requisite: NDS 473.

### NDS 472 Medical Nutrition Therapy II 3(3-0)

The application of medical nutrition therapy in the treatment and management of injury, illness, and other disease conditions. Prerequisites: NDS 471, admission to the Professional Phase of the Dietetics Program.

### NDS 473 Advanced Nutrition 4(4-0)

Biological needs in human nutrition based on current research and its applications. Prerequisites: Two semesters of chemistry; NDS 370; BIO 392 or CHM 421; admission into Professional Phase of the Dietetics Program.

### NDS 475WI Nutritional and Herbal Supplements 3(3-0)

The potential impact of non-nutrient components in food; nutritional supplements; and herbs in the prevention and treatment of disease via integrative and alternative medical approaches. Writing Intensive. Prerequisite: NDS 370.

### NDS 477 Assessing Nutritional Status 2(1-2)

Introduces dietary, anthropometric, biochemical, and clinical approaches to assessing nutritional status. Prerequisite: NDS 370.

### NDS 478 Nutrition for Health and Health Care 3(3-0)

This course addresses the role of nutrition in clinical care, providing students with an opportunity to advance their knowledge in nutrition from a clinical perspective. Prerequisite: NDS 370 with a grade of C or better.

### NDS 479 Professional Issues in Dietetics 1(1-0)

An analysis of the profession of dietetics and the pathway to dietetic registration. Issues and trends in dietetics are discussed. Prerequisites: Senior standing, signed Dietetics major.

### NDS 480 Nutritional Education and Counseling 4(4-0)

Teaching nutrition education, advising techniques, and counseling skills as applied explicitly to patients/clients in public health and clinical settings. Prerequisite: NDS 374; admission into the professional phase of the Dietetics Program.

### NDS 481 Community Nutrition: Field Work 3(Spec)

Consulting, teaching and supportive research experiences in the field with a nutritionally vulnerable group. Prerequisites: NDS 370, 480; acceptance into the Professional Phase of the Dietetics program.

### NDS 490 Independent Study in Foods and Nutrition 1-6(Spec)

A student-initiated learning activity focusing on a faculty approved topic in Dietetics or Nutrition. Prerequisite: Permission of instructor.

### NDS 497 Special Topics in Foods and Nutrition 1-15(Spec)

Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student's transcript.

### NDS 512 Global Nutrition 3(3-0)

Nutritional issues faced by populations around the world and in emergencies explored in depth including assessment, prevention, and relief. Recommended: NDS 271, NDS 370.



**NDS 557 Diets: Myths and Facts 3(3-0)**

This course provides an overview of the scientific literature related to the efficacy and safety of popular diets for weight loss. Prerequisite: NDS 370 with a grade of C or better; or graduate standing.

**NDS 560 Field Experience in International Nutrition 3(Spec)**

This is a faculty-led study abroad course to learn and have experience in food, culture, and nutritional problems in a host country. This is an elective course. Recommended: NDS 271, NDS 370, NDS 512.

**NDS 571 Clinical Nutrition 3(3-0)**

This course provides an overview of medical nutrition therapy with a focus on the current evidence-based nutrition practice guidelines for prevention and treatment of diseases. Prerequisites: NDS 370 and NDS 473 and BIO 392, or HSC 214 and HSC 215; one of the following: CHM 421 or CHM 425 or CHM 522; or graduate status.

**NDS 575 Geriatric Nutrition 3(3-0)**

Nutrition for older adults, including food selection, nutritional status, food-drug interaction and disease prevention. Prerequisite: NDS 370.

**NDS 577 Advanced Topics in Nutrition: Eating Disorders 3(3-0)**

Overview of the etiology, differential diagnosis, medical consequences, treatment, and prevention of eating disorders. Obesity in relation to eating disorders will also be addressed. May be offered as Writing Intensive. Prerequisite: NDS 370 or graduate status.

**NDS 597 Special Topics in Foods and Nutrition 1-15(Spec)**

Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student's transcript. This course is approved for offering in a distance learning format. Prerequisites: See Course Search and Registration.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**NDS 619 Continuing Registration for Final Research Project 1(1-0)****NDS 661 Macronutrients 3(3-0)****NDS 662 Micronutrients and Gene Interactions 3(3-0)****NDS 663 Advanced Eating Disorders and Nutrition 3(3-0)****NDS 664 Advanced Nutrition - Pharmacology 3(3-0)****NDS 665 Medical, Scientific and Proposal Writing 3(3-0)****NDS 667 Advanced Nutrition - End of Life Issues 3(3-0)****NDS 668 Advanced Nutrition - Pediatrics 3(3-0)****NDS 669 Advanced Nutrition - Sports 3(3-0)****NDS 670 Seminar: Nutrition 1-3(Spec)****NDS 671 Advanced Topics in Nutrition: Geriatrics 3(3-0)****NDS 672 Advanced Clinical Nutrition 3(3-0)****NDS 673 Advanced Nutritional Assessment 3(3-0)****NDS 674 Dietetic Internship: Clinical Experience 5(Spec)****NDS 675 Dietetic Internship: Foodservice Administration Experience 5(Spec)****NDS 676 Dietetic Internship: Summary Experience 2(Spec)****NDS 677 Nutritional Epidemiology 3(3-0)****NDS 678 Research Methods and Biostatistics 3(3-0)****NDS 679 Advanced Topics in Nutrition: Obesity 3(3-0)****NDS 697 Special Topics in Dietetics 1-15(Spec)****NDS 790 Independent Study in Dietetics 2-6(Spec)****NDS 797 Special Topics in Nutrition 1-15(Spec)****NDS 798 Thesis in Nutrition and Dietetics 1-6(Spec)****NDS 799 Capstone in Nutrition and Dietetics 3(3-0)****NSC - Neuroscience**

*See the Neuroscience Major for more information.*

**NSC 197 Special Topics in Neuroscience 1-4(Spec)**

Topics of special interest that are not normally included in existing courses. Prerequisites: See Course Search and Registration.

**NSC 297 Special Topics in Neuroscience 1-4(Spec)**

Topics of special interest that are not normally included in existing courses. Prerequisites: See Course Search and Registration.

**NSC 301 Cell and Molecular Neuroscience 3(3-0)**

Foundational topics in cellular and molecular neuroscience; focusing on structure and function of cell types of the nervous system, synaptic transmission, and neuroplasticity. Prerequisites: One of: BIO 101, 105, 112, 151; CHM 120, 127 or CHM 131. Recommended: completed at least 26 credit hours.

**NSC 302 Foundations of Behavioral and Systems Neuroscience 3(3-0)**

Foundational concepts of neuroscience examining behavioral processes and systems neuroscience. Prerequisite: NSC 301 with a C- or better.

**NSC 397 Special Topics in Neuroscience 1-4(Spec)**

Topics of special interest that are not normally included in existing courses. Prerequisites: See Course Search and Registration.

**NSC 401 Principles of Neuroscience I 4(4-0)**

First of two upper-level courses for the Grad-Prep undergraduate Neuroscience majors covering the field of neuroscience comprehensively. Prerequisites: PSY 387, BIO 392; permission of instructor.

**NSC 402 Principles of Neuroscience II 4(4-0)**

Second of two upper-level courses for the Grad-Prep undergraduate Neuroscience majors covering the field of neuroscience comprehensively. Prerequisite: NSC 401.

**NSC 496 Neuroscience Directed Research 1-6(Spec)**

Research course for students who desire to investigate a research problem in neuroscience. Prerequisite: Must file written proposal approved by faculty sponsor in department office prior to registration. Recommended: BIO 392, PSY 387, PSY 211, BIO 500 or HSC 544.

**NSC 497 Special Topics in Neuroscience 1-4(Spec)**

Topics of special interest that are not normally included in existing courses. Prerequisites: PSY 387 and 56 semester hours.

**NSC 501 Principles of Neuroscience I 4(4-0)**

First of two core courses for advanced (grad-prep) undergraduates and graduates providing comprehensive neuroscience fundamentals such as history, key cells and molecules, and sensation mechanisms. Prerequisites: A signed major in Neuroscience Grad-Prep (Opt. B); PSY 387 (3) or BIO 392 (4); or graduate standing in the Neuroscience Graduate Program.

**NSC 502 Principles of Neuroscience II 4(4-0)**

Second of two core courses for advanced (grad-prep) undergraduates and graduates providing comprehensive neuroscience fundamentals. Prerequisites: NSC 501.

**NSC 597 Special Topics in Neuroscience 1-4(Spec)**

Topics of special interest that are not normally included in existing courses. Prerequisites: PSY 387 and completion of 56 semester hours; or graduate standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**NSC 600 Special Issues in Neuroscience 1-12(Spec)****NSC 690 Research Seminar Neuroscience 1-4(Spec)****NSC 696 Directed Research 1-12(Spec)****NSC 697 Independent Study 1-8(Spec)****NSC 789 Graduate Seminar in Neuroscience 1-12(Spec)****NSC 790 Graduate Research Seminar 1(1-0)****NSC 798 Thesis: Design 1-3(Spec)****NSC 799 Thesis: Implementation 1-3(Spec)****NSC 800 Neuroscience Research for Doctoral Candidacy 1-12(Spec)****NSC 898 Doctoral Dissertation: Design 1-12(Spec)****NSC 899 Doctoral Dissertation: Implementation 1-12(Spec)****NUR - Nursing**

*See the Department of Rehabilitation and Medical Sciences for more information.*

**NUR 270 Health Assessment for Reduction of Risk Potential 3(2-2)**

This laboratory course focuses on comprehensive assessment skills for the purpose of reducing the likelihood that clients will develop or exacerbate health problems. Pre/Co-requisite: HSC 201.

**NUR 271 Basic Care and Comfort 3(3-0)**

Didactic instruction about the importance of comfort and the performance of activities of daily living is linked with direct nursing care and simulation experiences. Prerequisite: Admission to the pre-licensure BSN program or listed on a declared major; HSC 201, HSC 214; Co-requisite: NUR 272.

**NUR 272 Basic Care and Comfort Clinical 3(Spec)**

Direct nursing care and simulation experiences about the importance of comfort and the performance of activities of daily living. Prerequisites: HSC 201, HSC 214; Co-requisite: NUR 271.

**NUR 273 Health Promotion and Maintenance 2(2-0)**

This didactic course explores the importance of prevention and early detection of health problems and strategies to achieve optimal health. Pre/co-requisites: NUR 270, NUR 271, NUR 272.

**NUR 274 Skills for Quality, Safety, and Infection Control 3(2-2)**

This laboratory course focuses on essential nursing skills with an emphasis on protecting clients and health care personnel from health and environmental hazards. Pre/co-requisites: NUR 270, NUR 271, NUR 272.

**NUR 275 Psychosocial Integrity 2(2-0)**

Didactic instruction about acute or chronic mental illness is linked with direct nursing care that promotes and supports the emotional, spiritual, mental, and social well-being. Prerequisites: NUR 270, NUR 271, NUR 272; Co-requisite: NUR 276.

**NUR 276 Psychosocial Integrity Clinical 3(Spec)**

Direct nursing care that promotes and supports the emotional, spiritual, mental, and social well-being of the client experiencing mental illness. Prerequisites: NUR 270, NUR 271, NUR 272; Co-requisite: NUR 275.

**NUR 300WI Introduction to Baccalaureate Nursing Practice 3(3-0)**

Introduction to the role of the BSN-prepared nurse, which includes nursing theory and variables which impact the nursing profession. Writing Intensive. Prerequisites: Tier 2: Admission to the Nursing Program (BSN) or Tier 1: Level 2 or Tier 1: Level 3 Admissions to the Nursing Program.

**NUR 301 Health Assessment 3(Spec)**

Acquisition of the knowledge and skills to conduct environmental, cultural, and mental/behavioral health assessments of clients, including a head-to-toe evaluation. Prerequisites: Tier 2: Admission to the Nursing Program (BSN) or Tier 1: Level 2 or Tier 1: Level 3 admission to the Nursing Program.

**NUR 302 Research and Evidence-Based Practice 3(3-0)**

Introduction to evidence-based practice and research process, common research methods, and relevant statistical analysis for quantitative and qualitative studies. Prerequisites: Tier 2: Admission to the Nursing Program (BSN) or Tier 1: Level 2 or Tier 1: Level 3 admission to the Nursing Program. Pre/Co-requisite: NUR 300WI.

**NUR 320 Nursing Informatics 3(3-0)**

Introduction to the science and social/ethical issues for research and practice related to nursing informatics and information management. Prerequisites: Tier 2: Admission to the Nursing Program (BSN) or Tier 1: Level 2 or Tier 1: Level 3 admission to the Nursing Program.

**NUR 321 Health Care Finance and Economics 3(3-0)**

Focuses on the complexities of health care finance, economics, and policy as they impact professional nursing practice and leadership. Prerequisite: Tier 2: Admission to the Nursing Program (BSN) or Tier 1: Level 2 or Tier 1: Level 3 admission to the Nursing Program; NUR 300WI or NUR 301.

**NUR 322 Introduction to Nursing Education 3(3-0)**

Expands students' teaching and learning skills by introducing principles and best practices required for professional and academic nurse educators. Prerequisite: Tier 2: Admission to the Nursing Program (BSN) or Tier 1: Level 2 or Tier 1: Level 3 admission to the Nursing Program; NUR 300WI or NUR 301.

**NUR 323 Nursing Case Management and Care Coordination 3(3-0)**

Introduction to the basic components and practice of case management and care coordination in a variety of health care and third-party payer settings. Prerequisite: Tier 2: Admission to the Nursing Program (BSN) or Tier 1: Level 2 or Tier 1: Level 3 admission to the Nursing Program. Pre/Co-requisite: NUR 300WI.

**NUR 370 Pathophysiology for Physiological Adaptation 3(3-0)**

This course explores the pathophysiology behind unexpected responses, emergencies, and imbalances to manage and provide care for clients with acute and chronic physical health conditions. Pre/Co-requisites: NUR 273, NUR 274, NUR 275, NUR 276.

**NUR 371 Pharmacological and Parenteral Therapies 3(3-0)**

Lifespan focus on the safe administration of medications and parenteral therapies. Pre/co-requisites: NUR 273, NUR 274, NUR 275, NUR 276.

**NUR 372 Obstetrics, Immediate Newborn Care, and Pediatrics 2(2-0)**

Didactic instruction about reproduction across the lifespan and pediatric health is linked with direct nursing care and/or simulated experiences focusing on childbearing and pediatric development. Prerequisites: NUR 273, NUR 274, NUR 275, NUR 276; Co-requisite: NUR 373.

**NUR 373 Obstetrics, Immediate Newborn Care, and Pediatrics Clinical 3(Spec)**

Direct nursing care and/or simulated experiences focusing on childbearing and pediatric development and nursing care. Prerequisites: NUR 273, NUR 274, NUR 275, NUR 276; Co-requisite: NUR 372.

**NUR 374 Engaging the Global Community and Interprofessional Healthcare Partnerships 3(3-0)**

This didactic course examines the importance of intentional collaboration across professions and with care team members, clients, families, communities, and other stakeholders to optimize care. Pre/co-requisites: NUR 370, NUR 371, NUR 372, NUR 373.

**NUR 375 Acute and Chronic Care Management 4 (4-0)**

Didactic instruction about disease prevention and management is linked with direct nursing care and simulated experiences of adult clients with chronic diseases. Prerequisites: NUR 370, NUR 371, NUR 372, NUR 373; Co-requisite: NUR 376.

**NUR 376 Acute and Chronic Care Management Clinical 3(Spec)**

Direct nursing care and simulated experiences of adult clients with chronic diseases for the prevention of negative sequelae; regenerative or restorative care. Prerequisites: NUR 370, NUR 371, NUR 372, NUR 373; Co-requisite: NUR 375.

**NUR 390WI Concepts of Culture and Diversity 3(3-0)**

Expands knowledge and understanding about cultural beliefs and practices as they influence nursing practice and health care delivery. This course may be offered in an online format. Writing Intensive. Prerequisites: NUR 301 or 302.

**NUR 400 Concepts of Global and Population Health 4(4-0)**

Exploration of the concepts of global health, epidemiology, and disease prevention within vulnerable groups and communities, including factors influencing delivery of public health care. Prerequisites: Tier 2: Admission to the Nursing Program (BSN); NUR 301, NUR 302.

**NUR 401 Nursing Leadership and Health Systems 4(4-0)**

Expands knowledge and skills required for leadership and management roles within health care systems to include health policy, finance, and regulation as they impact nursing. Prerequisites: Tier 2: Admission to the Nursing Program (BSN); NUR 300WI. Pre/Co-requisites: NUR 301, NUR 302.

**NUR 470 Healthcare Technologies and Nursing Informatics 2(2-0)**

Information and communication technologies are the focus of this didactic course as they are utilized to provide care, gather data, drive decision making, and support health professionals. Pre/Co-requisites: NUR 374, NUR 375, NUR 376.

**NUR 471 Nursing Care in Death and Dying 2(2-0)**

This didactic course explores hospice and palliative care options, which include end-of-life nursing care implications through the principles of spirituality. Pre/Co-requisites: NUR 374, NUR 375, NUR 376.

**NUR 472 Population Health through a Systems-Based Practice 3(3-0)**

Didactic instruction about population health is linked with direct nursing care of both traditional and non-traditional experiences within communities. Pre/Co-requisites: NUR 374, NUR 375, NUR 376; Co-Requisite: NUR 473.

**NUR 473 Population Health through a Systems-Based Practice Clinical 3(Spec)**

Direct nursing care of both traditional and non-traditional experiences within communities, public health, or local government entities for the improvement of equitable population health outcomes. Prerequisites: NUR 374, NUR 375, NUR 376; Co-requisite: NUR 472.

**NUR 474 Nursing Synthesis Capstone 4(4-0)**

This didactic course prioritizes nursing student self-reflection to foster personal health, resilience, and well-being, lifelong learning, and supports the acquisition of nursing expertise. Pre/co-requisite: NUR 470, NUR 471, NUR 472, NUR 473.

**NUR 475 Professionalism, Management of Care, and Leadership Development 3(3-0)**

Didactic instruction about cultivation of a sustainable professional nursing identity, accountability, leadership, collaborative disposition, and comportment. Prerequisites: NUR 470, NUR 471, NUR 472, NUR 473; Co-requisite: NUR 476.

**NUR 476 Professionalism, Management of Care, and Leadership Development Clinical 5(Spec)**

Direct nursing care experiences in a variety of health care settings. Prerequisites: NUR 470, NUR 471, NUR 472, NUR 473; Co-requisite: NUR 475.

**NUR 499 Capstone: Systems Thinking and Quality Improvement 4(Spec)**

Capstone course to synthesize program content and current evidence to improve outcomes through a quality improvement project in a health care organization. Prerequisites: Tier 2: Admission to the Nursing Program (BSN); NUR 300WI, NUR 301, NUR 302, NUR 390WI, NUR 400. Pre/Co-requisites: NUR 401.

## OJB - Ojibwe

*See the Department of History, World Languages, and Cultures for more information.*

**OJB 101 Elementary Ojibwe I 3(3-0)**

Designed for students who have had no Ojibwe language instruction. Basic language skills. Introduction to Ojibwe culture via the language.

**OJB 102 Elementary Ojibwe II 3(3-0)**

Basic language skills. Continuation of OJB 101 including the continued introduction of the culture of the Ojibwe people. Prerequisite: OJB 101.

**OJB 201 Intermediate Ojibwe I 3(3-0)**

Review of grammar and further development of all language skills. Further explanation of Ojibwe culture. Prerequisites: OJB 101, OJB 102.

**OJB 202 Intermediate Ojibwe II 3(3-0)**

Designed for those who wish to continue the study of the Ojibwe language. The emphasis will be on the written language. Prerequisites: OJB 101, OJB 102; or knowledge of the Ojibwe language and OJB 201.

## PAD - Public Administration

*See the School of Politics, Society, Justice, and Public Service for more information.*

**PAD 210 Introduction to Public Administration 3(3-0)**

Provides a broad understanding of basic concepts and principles of public administration, including the role, structure, and functions of public agencies and how they operate. May be offered as Writing Intensive.

**PAD 211 Introduction to Nonprofit Leadership 3(3-0)**

An overview of American nonprofit organizations, including historical and philosophical foundations of nonprofit organizations, career development and exploration, and attributes of successful nonprofit leaders. May be offered as Writing Intensive.

**PAD 313 Public Budgeting Processes 3(3-0)**

Study of the creation and administrative management of public budgets. Emphasizes processes of budget preparation, adoption, administration and evaluation at various levels of government. Prerequisite: PAD 210.

**PAD 355 Nonprofit Lobbying Strategies 3(3-0)**

A developed perspective on lobbying expectations and guidelines for the social sector. Considers lobbying and policy making through the lens of traditional nonprofit organization models. This class is required for the Certified Nonprofit Professional credential and the Nonprofit Leadership and Service minor. This course may be offered in an online format. Prerequisite: Permission of instructor.

**PAD 375 Certified Nonprofit Professional Lab I 1(1-3)**

Experiential learning practicum focused on professional nonprofit administration activities for students pursuing the Certified Nonprofit Professional credential. CR/NC only. Pre/Co-requisite: PAD 211.

**PAD 376 Certified Nonprofit Professional Lab II 1(1-3)**

Experiential learning practicum focused on advanced nonprofit leadership activities for students pursuing the Certified Nonprofit Professional credential. CR/NC only. Pre/Co-requisite: PAD 211. Recommended: PAD 375.

**PAD 380QR Public Sector Research Methods 3(3-0)**

Overview of common public sector research techniques and how research findings can be integrated into effective organizational decisions. Quantitative Reasoning. Prerequisite: PAD 210.

**PAD 398 Special Topics in Public Administration 3-9(3-0)**

Examines the role of public and nonprofit organizations in society. Covers special topics of interest not covered in existing courses. May be repeated when the content is not a duplication of a previous special topics offering. Prerequisites: Permission of the instructor. Recommended: PAD 210.

**PAD 399 CNP Internship for the Nonprofit Sector 1-12(Spec)**

An integrative learning experience where students apply textbook knowledge to nonprofit organization work experience. Certified Nonprofit Professional credential students must complete the educational contract prior to advisor approval. CR/NC Only. Prerequisites: A minimum of 9 credit hours in the minor prior to registration.

**PAD 411 Public Sector Human Resources 3(3-0)**

Study of the policies, strategies, and legal processes that define human resources management in public and nonprofit organizations. May be offered as Writing Intensive. Prerequisite: PAD 210.

**PAD 412 Nonprofit Seminar 3(3-0)**

This course is a seminar experience for interested nonprofit students. We will examine models, concepts, and cases to conduct extensive analysis of the nonprofit sector. Prerequisites: PAD 211, PAD 375 or PAD 376.

**PAD 413 Organizational Leadership and Behavior 3(3-0)**

Study of the policies and strategies used in the public sector to lead, manage, and motivate employees to solve societal problems. May be offered as Writing Intensive. Prerequisite: PAD 210.

**PAD 414 Public Policy Analysis 3(3-0)**

Advanced overview of the practice of public policy analysis and program evaluation. Prerequisite: PSC 280 or PAD 380.

**PAD 521 Board Governance and Executive Leadership 3(3-0)**

This course is designed to introduce students to the fundamentals of governance, trusteeship, and executive leadership in nonprofit organizations. Prerequisites: Graduate standing or completion of 56 credit hours.

**PAD 523WI Fundamentals of Grant Writing and Management 3(3-0)**

This course examines grant seeking, writing, proposal development, management, and evaluation in public and nonprofit organizations. Writing Intensive. Prerequisite: Graduate standing or completion of 56 credit hours.

**PAD 555 Managing Modern Local Government 3(3-0)**

Overview of major themes and issues confronting the management of local government. Prerequisites: Graduate standing or completion of 56 credit hours.

**PAD 561 Administration and Policy in American State Government 3(3-0)**

Political, legislative, executive, judicial and administrative processes of American state government with emphasis on the way they influence public policies. Prerequisites: Graduate standing or completion of 56 credit hours.

**PAD 585 Public Sector Information Technology Management 3(3-0)**

Study of the administrative strategies used to successfully implement information technology in public sector organizations. Prerequisite: 56 credit hours completed or graduate standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**PAD 610 Foundations of Public Administration 3(3-0)****PAD 620 Nonprofit Management 3(3-0)****PAD 622 Strategic Planning for Public/Non-Profit Organizations 3(3-0)****PAD 623 Public Policy Processes and Evaluation 3(3-0)****PAD 711 Public Personnel Management 3(3-0)****PAD 712 Implementation and Reform of Public Programs 3(3-0)****PAD 713 Public Budgeting and Finance 3(3-0)****PAD 714 Program Analysis and Evaluation 3(3-0)****PAD 773 Administration and Ethics in Public Service 3(3-0)****PAD 775 Organization Theory and Behavior 3(3-0)****PAD 780 Public Sector Research Methods 3(3-0)****PAD 785 Strategic Leadership 3(3-0)****PAD 791 Immersive Policy and Management Analysis: Study Abroad in Seoul 3(0-3)****PAD 795 Internship in Public Administration 1-6(Spec)****PAD 796 Applied Research in Public Administration 3(3-0)****PAD 799 Public Service Competencies Capstone 1(Spec)****PED - Sports Instructional Program (Activity)**

*See the Department of Physical Education and Sport for more information.*

**Note:** a limitation of 6 hours of PED and RLA courses may be applied toward the requirements for graduation.

**PED 121 Steelhead Fly Tying 1(Spec)**

This course introduces the materials and techniques of tying flies for river steelhead fishing. All materials will be provided through course fee.

**PED 123 Aqua-Aerobics 1(Spec)**

Students learn fitness concepts and aquatic safety principles and perform water based fitness exercises.

**PED 127 Beginning Swimming 1(Spec)**

Instruction in basic skills of water adjustment, gliding, floating, kicking and learning to swim across the pool; includes safety and self-help techniques.

**PED 129 Intermediate Swimming 1(Spec)**

Introduction to swim strokes, backstroke, front crawl, elementary backstroke, sidestroke, breaststroke, and butterfly. Recommended: PED 127 or ability to swim one length of the pool.

**PED 130 Advanced Swimming for Fitness 1(Spec)**

Fitness and conditioning swimming which includes advanced stroke techniques. Ideal for those with previous competitive swim experience. Recommended: Ability to swim three lengths of the pool using front crawl, backstroke and breaststroke.

**PED 131 Disc Golf 1(Spec)**

A course designed to provide students with skills and knowledge to participate in disc golf. Students must furnish own discs made specifically for disc golf.

**PED 132 Introduction to Clogging 1(Spec)**

Beginner level of clogging. Students will learn basic level clogging steps using a variety of music. Students will learn to read cue-sheets and understand the history of clogging. Identical to DAN 132. Credit may not be earned in more than one of these courses.

**PED 133 Zumba 1(1-0)**

Latin inspired dance fitness class incorporating Latin and International music and the core Zumba movements to improve and maintain cardiovascular fitness.

**PED 134 Zumba Fitness 2(2-0)**

Latin inspired dance fitness class incorporating Latin and International music to improve and maintain cardiovascular fitness. Course will include core and variations of Zumba movements.

**PED 136 Aerobic Kickboxing 2(Spec)**

This course is designed to provide students with an aerobic workout while learning basic techniques based on various forms of martial arts.

**PED 137 Fitness Walking 2(Spec)**

Course will introduce fitness walking designed for students who want to begin a program to improve their cardiovascular endurance and learn basic fitness training principles.

**PED 138 Cardio-Variety 2(Spec)**

A beginning aerobic workout course comprised of conditioning activities and vigorous nonstop rhythmic movement patterns designed to improve or maintain cardiovascular endurance. Recommended: Physician approval.

**PED 141 Judo 2(2-0)**

Judo is a Japanese martial art that is both an art and an Olympic Sport. It involves throwing and grappling techniques.

**PED 142 Hapkido: The Korean Art of Self-Defense 2(Spec)**

Hapkido is an eclectic Korean martial art that teaches effective self-defense, street survival, and personal protection by combining elements of Judo, Taekwondo, and Aikido.

**PED 143 Yoga Sculpt 1(1-0)**

Yoga Sculpt is a dynamic flow yoga style course that takes students to their athletic edge with challenging strength and balance poses based on core-generated alignment.

**PED 144 Pilates 2(2-0)**

Course designed to improve total fitness, posture, and appearance through exercise methods strengthening core postural muscles and developing body alignment using the Pilates model.

**PED 145 Fundamentals of Gymnastics 1(Spec)**

Course will introduce and improve basic gymnastics skills. No prior experience required.

**PED 146 Yoga: Beginning 1(Spec)**

This course focuses on the fundamentals of yoga through the practice of basic yoga postures and essential yoga breathing techniques.

**PED 147 Introduction to Fitness Yoga 2(Spec)**

This course focuses on yoga as a system of regular exercise to improve physical fitness.

**PED 148 Yoga for Wellness 2(2-0)**

This course focuses on the specific application of yoga poses and techniques to address various health and wellness issues.

**PED 149 Yoga and Meditation 2(2-0)**

This course focuses on yoga and meditation techniques to relax and revitalize the mind and body.



**PED 150 Archery 1(Spec)**

An introduction to the basic skills of the sport of archery.

**PED 152 Beginning Tae Kwon Do 2(2-0)**

Taekwondo is a Korean martial art and Olympic sport featuring techniques for self-defense and competitive sparring, empty hand or weapons-based forms, and board breaking.

**PED 153 Jogging 1(Spec)**

A course comprised of jogging designed for students who want to begin a program to improve their cardiovascular endurance.

**PED 154 Bowling, Beginning 1(Spec)**

An introduction to the skills, strategies and terminology of bowling.

**PED 155 Beginning Fencing 1(Spec)**

An introduction to the skills, strategies, and terminology of fencing. A fee is charged for equipment.

**PED 156 Golf, Beginning 1(Spec)**

Introduction to golf. Includes instruction and practice on the fundamentals of the golf swing, rules, equipment, terminology and etiquette. Class may meet at local golf course.

**PED 159 Billiards, Beginning 1(Spec)**

An introduction to the skills, strategies and terminology of billiards. Equipment is provided.

**PED 160 Racquetball, Beginning 1(Spec)**

An introduction to the skills, strategies and terminology of racquetball singles and doubles play.

**PED 161 Snowboarding, Beginning 1(Spec)**

Introduction and development of beginning snowboarding skills. Class meets at local ski/snowboarding facility. Students are responsible for travel and overnight accommodations. Course fee only covers lift tickets.

**PED 162 Snow Skiing, Beginning 1(Spec)**

Introduction and development of beginning downhill snow skiing skills. Class meets at local ski/snowboarding facility. Students are responsible for travel and overnight accommodations. Course fee only covers lift tickets.

**PED 163 Cross Country Skiing 1(Spec)**

Beginning class in cross country skiing involving on-snow techniques, waxing, proper equipment choices, and field trips.

**PED 164 Individual Sports 2(Spec)**

A course which will expose students to badminton, golf, and tennis, which are individual, lifetime sports.

**PED 165 Tennis, Beginning 1(Spec)**

Student furnishes own racket and balls.

**PED 166 Beginning Foil Fencing 2(2-0)**

Basics of fencing, footwork, blade work bouting and equipment use.

**PED 169 Workshop in Leisure Time Sports 1-6(Spec)**

Development of basic skills needed to play basketball.

**PED 172 Introduction to Boxing 1(Spec)**

Students will learn boxing principles, techniques, safe practices and strategies. No experience necessary. Non-contact.

**PED 174 Team Sports 2(Spec)**

**PED 175 Wallyball 1(1-0)**

Wallyball combines the skills of volleyball, racketball, and handball.

**PED 176 Soccer 1(Spec)**

An introduction to the skills, strategies and terminology of soccer through instruction and student participation.

**PED 177 Softball 1(Spec)**

Slow-pitch softball designed for beginners through advanced skilled performers.

**PED 178 Volleyball, Beginning 1(Spec)**

Introduction to basic skills, rules and strategy.

**PED 179 Fundamentals of Floor Hockey 1(Spec)**

To learn the fundamentals of floor hockey.

**PED 180 Individual Program of Physical Activity 1-4(Spec)**

Designed for students physically unable to participate in regularly scheduled activities.

**PED 184 Military Physical Conditioning 1(Spec)**

**PED 185 Physical Conditioning and Body Mechanics 1(Spec)**

Develop physical conditioning using weight training equipment and cardiovascular exercises.

**PED 186 Physical Fitness for Life 2(2-0)**

**PED 189 Weight Training and Conditioning 2(Spec)**

This is a personal fitness course. It will cover the importance of muscular work for acquiring strength needed for successful performance in most physical activities and its relationship to the total conditioning program.

**PED 236 Intermediate Aerobic Kickboxing 2(Spec)**

Non-contact, fast-paced, aerobic workout done to music utilizing kicks from martial arts and punches from boxing, while emphasizing heart rate monitoring and developing consistent form. Recommended: PED 136 or previous aerobic experience.

**PED 238 Intermediate Aerobics 2(1-2)**

This class provides increased length and difficulty of aerobic exercise. Designed to improve or maintain cardiovascular endurance for those with previous aerobic experience. Recommended: Previous aerobic experience; physician approval.

**PED 244 Pilates: Intermediate 2(2-0)**

This course is designed to strengthen the Pilates practice of students who have had previous Pilates experience. Students will perform movements using the Pilates ring. Prerequisite: PED 144.

**PED 246 Yoga, Intermediate 1(Spec)**

This course focuses on strengthening the yoga practice of students who have had previous experience with the basic foundations of yoga. Recommended: PED 146, 147, 148, 149, or previous yoga experience.

**PED 253 Marathon 2(1-2)**

Class designed to physically and mentally prepare students to complete a marathon. Recommended: PED 153.

**PED 254 Bowling, Intermediate 1(Spec)**

To develop further understanding and appreciation of bowling. To develop further proficiency in the fundamental skills of bowling. Course Fee. Recommended: PED 154.

**PED 255 Intermediate Fencing 1(Spec)**

Opportunity for students to continue beyond the beginning level of skill and strategy mastery. A fee is charged for equipment. Prerequisite: PED 142.

**PED 256 Intermediate Golf 2(Spec)**

Intermediate golf skills taught. Classes meet at local golf course chosen by instructor. Student furnishes own clubs and transportation. Recommended: Beginning golf skills.

**PED 261 Snowboarding, Intermediate 1(Spec)**

Development of intermediate snowboarding skills. Class meets at local ski/snowboarding facility. Students are responsible for travel and overnight accommodations. Course fee only covers lift tickets. Recommended: PED 161, previous snowboarding experience.

**PED 262 Snow Skiing, Intermediate 1(Spec)**

Development of intermediate downhill snow skiing skills. Class meets at local ski/snowboarding facility. Students are responsible for travel and overnight accommodations. Course fee only covers lift tickets. Recommended: PED 162, previous skiing experience.

**PED 265 Tennis, Intermediate 1(Spec)**

This course is designed to develop intermediate-level tennis skills and introduce techniques and strategies beyond beginner level.

**PED 266 Competitive Fencing 2(Spec)**

Course will focus on bouting, electric fencing, and tournament training in foil and épée. Prerequisites: PED 166 or PED 167.

**PED 270 3-on-3 Basketball 1(Spec)**

Development of skills needed to play 3-on-3 basketball. Recommended: PED 170.

**PED 272 Boxing for Fitness 2(2-0)**

Workout course involving vigorous boxing movement patterns designed to improve cardiovascular endurance, hand-eye coordination, and core strength. Class covers boxing principles, techniques and safe practices. Recommended: PED 172.

**PED 278 Volleyball, Intermediate 1(Spec)**

Recommended: Skill test; student should perform spiking and defensive movements.

**PED 285 Strength Training 1(Spec)**

Course designed to provide students the opportunity to improve muscular strength and endurance through the utilization of resistant weight training.

**PED 356 Golf, Advanced 2(2-0)**

Development of advanced skills. Planning course strategy; rule interpretation; designing and administering tournaments; figuring handicaps, index, course slope. Class meets at golf course. Course fee is charged.

**PED 360 Racquetball, Advanced 1(Spec)**

Student furnishes racquet, official ball, and eye protection.

**PED 361 Advanced Snowboarding 1(Spec)**

To further understand, appreciate and develop proficiency in the skills of advanced snowboarding. Course fee. Recommended: PED 261.

**PED 362 Snow Skiing, Advanced 1(Spec)**

A course fee for lift tickets and lessons is charged. Student furnishes own equipment or rents it from ski resort.

**PED 363 Indoor Racket and Paddle Sports 2(2-0)**

Combines units in badminton-table tennis and/or tennis-racquetball; racket sports with somewhat similar strategies.

**PED 365 Tennis, Advanced 1(Spec)**

This course is designed to develop advanced-level tennis skills and introduce techniques and strategies beyond intermediate level. Recommended: PED 265.

## PES - Physical Education Professional

See the Department of Physical Education and Sport for more information.

**PES 104 Sport Skill Development - Secondary Level 3(Spec)**

Sports for grades 7-12 for Physical Education Secondary minors and for Physical Education majors.



**PES 105 Introduction to Physical Education & Skill Development 2(2-1)**

Overview of physical education history, profession, sub-disciplines, professional organizations, and preparation for the skills test required by the physical education teacher preparation program.

**PES 115 Motor Development 2(2-0)**

Comprehensive study of motor development across the lifespan as a change in functional capacity from prenatal development to elderly adult movement patterns.

**PES 119 Introduction to Sport Management 3(3-0)**

Introduction to the field of sport management. Specific focus on the nature, scope, and significance of the industry. A survey of professional opportunities.

**PES 120 Skin and Scuba Diving 1(Spec)**

Students are taught safe skin and scuba techniques. Students provide their own, approved, snorkeling equipment. Course fee required for equipment rental, use, and certification costs.

**PES 125 Principles and Foundations of Coaching 3(3-0)**

Practical information and issues relevant to professional practice for all athletic coaches. Includes eligibility for Coaching Advancement Program (C.A.P.) certification. This course may be offered in an online format.

**PES 143 Sexual Assault and Harassment/Awareness and Avoidance 2(2-0)**

A class designed to provide students with appropriate knowledge and skills to deal appropriately with sexual assault and sexual harassment.

*PES 145 Skill Development in Gymnastics 1(0-2)*

**PES 175 Introduction to Esport Management 3(3-0)**

Overview of the various areas of the esport industry including career opportunities and business concepts required to manage esport organizations and operations. This course may be offered in an online format.

**PES 180 Sport Management Governance & Organizational Theory 3(3-0)**

The managerial fundamentals and principles applied to the sport industry: concepts and functions of management, organizational theories, human resources, integrated issues and trends. Pre/Co-requisite: PES 119.

**PES 186QR Principles of Physical Fitness for Lifelong Wellness 3(3-0)**

Designed to enable lifetime fitness for individuals from all backgrounds. Study and demonstrate physical fitness concepts; develop and implement personal fitness program. Quantitative Reasoning.

**PES 203 Physical Education Program for Grades K-3 3(2-2)**

Foundations for planning physical education for grades K-3. Studies of developmental characteristics of children grades K-3 are used to plan physical education programs.

**PES 210 Mental Training for Sport Performance 3(3-0)**

Development of the mental skills of self-concept, confidence, tension control, concentration, and visual imagery to allow students to perform to their potential in athletic competition.

**PES 218QR Sport Analytics 3(3-0)**

Theory, development, and application of analytics in sport for purposes of player performance, team management/operations, team valuation, social media analysis, sponsorship metrics, and fantasy competitions. Quantitative Reasoning. Prerequisites: PES 119, PES 180 both with a B- or better.

**PES 224 WSI-Swimming and Water Safety 3(2-2)**

Methods and techniques for teaching swimming courses as well as emergency water rescue. There is a \$10 aquatic fee. Prerequisite: Ability to swim 100 yards. Highly recommended: CPR and First Aid.

**PES 225 Athletic Conditioning for Coaches 3(3-0)**

Principles of physical training and nutrition as they apply to the short and long term conditioning of athletes at various levels of competition and sports. This course may be offered in an online format. Prerequisite: PES 125.

**PES 255 Athletic Skills and Techniques 2(2-0)**

A study of the skills necessary for athletes to be successful, and the techniques, drills and strategies coaches need to facilitate skilled performance. This course may be offered in an online format. Prerequisite: PES 125.

**PES 271 Basketball 2(2-0)**

Methods and materials for the teaching of basketball. Prerequisite: PED 171; or intermediate skill.

**PES 279 Sport First Aid and Athletic Emergencies 3(3-0)**

A coach's role from the perspective of policy and practice in managing injuries and emergencies common to the athletic and sport culture. This course may be offered in an online format. Pre/Co-requisite: PES 125.

**PES 280 Economics & Finance in the Sport Industry 3(3-0)**

Examines and introduces the principles of economics, accounting, and finance as they apply to the sport industry. Prerequisites: PES 119, PES 180 both with B- or better.

**PES 293 Field Study in Sport Management 1-4(Spec)**

Provides exposure via experiences in select sport related organizations. Students enroll in 1 to 4 credits (45-180 clock hours to meet course requirements). Prerequisite: PES 119 with a B- or better; Pre/Co-requisite: PES 180.

**PES 297 Special Topics in Physical Education and Sport 1-12(Spec)**

Contains subject matter not included in courses currently listed in the Bulletin.

**PES 300 Wilderness Experience for Leadership Development 3(2-2)**

A course on leadership skills with applications for traditional and alternative learning environments which is taught in the context of a seven-day wilderness expedition.

**PES 301 Exercise Psychology 3(3-0)**

*An overview of exercise psychology, introducing a broad base of knowledge of how to alter exercise-related behaviors and understand psychological outcomes of physical activity. May be offered as Writing Intensive. Recommended: HSC 106QR or PES 186QR or PSY 100. (University Program Group III-A: Behavioral Sciences)*

**PES 302 Fundamentals of Motor Learning 3(3-0)**

Components of successful motor performance, theories of learning, nervous system function, practice methods, teaching methodology, and psychological concepts related to physical education, coaching, and rehabilitation. Prerequisites: Completion of at least 24 credit hours; Recommended: PES 115, PSY 100.

**PES 303 Physical Education Program for Grades 4-6 3(2-2)**

Foundations for planning physical education for grades 4-6. Studies of developmental characteristics of children grades 4-6 are used to plan physical education programs. Prerequisite: PES 203.

**PES 304 Youth Sports and Diverse Learners 3(3-0)**

*Comprehensive study of problems involved in organizing and coaching youth sports. Investigation into coaching youth athletes of diverse backgrounds. Recommended: PSY 100 or SOC 100 or SOC 201. (University Program Group IV-A: Studies in Discrimination)*

**PES 305 Physical Activity and Wellness within Nordic Culture 3(3-0)**

*An investigation of physical activity behaviors and wellness status of the Nordic culture, one of the most physically active and fit cultures in the world. Recommended: HSC 106QR; PES 186QR; SOC 100; SOC 201, junior standing. (University Program Group IV-B: Studies in Cultures Outside the Anglo-American Tradition)*

**PES 311 Psychology of Coaching 3(3-0)**

A study of the interaction between psychological variables and performance in sports and physical activity. Coaching applications are emphasized. This course may be offered in an online format. Pre/Co-requisite: PES 255. Prerequisite: PES 125.

**PES 313 Elementary Physical Education Methods and Materials 2(2-0)**

Methods and applications of planning and teaching elementary physical education including individual and group activities, fitness activities, modified sport and precursors to lifetime activities. Prerequisites: PES 215.

**PES 318 Social, Historical & Global Issues in Sport 3(3-0)**

A critical examination of sport through prevailing theories in sport sociology. Historical perspectives will also be addressed. Prerequisites: minimum 56 credits.

**PES 319 Women and Sport 2(2-0)**

An investigation of the motivational and social implications of women's participation in sport. Identical to WGS 319. Credit may not be earned in more than one of these courses.

**PES 321 ARC Lifeguard Certification 3(Spec)**

The CMU lifeguard course provides ARC lifeguarding, CPR, and first aid certifications necessary to consider lifeguarding at a swimming pool or non-surf beach. This course may be offered in a hybrid format. Prerequisites: swim 500 yards continuously; surface dive to 9 feet and recover a 10 pound diving brick; surface dive to 5 feet and swim underwater for 15 yards; tread water for 1 minute.

**PES 322 Applied Skills & Methods - Team Sports 2(2-0)**

Emphasis on the development and use of skills and strategies in lifetime team sports. Methods for teaching skills and strategies are a major emphasis. Prerequisites: PES 105, 115; successful completion of departmental Sports Skill Competency Assessment Program (SSCAP).

**PES 324 Applied Skills & Methods - Rhythmic Activities 2(2-0)**

Enable students to plan and implement effective rhythmic movement experiences for students across the K-12 curriculum. Prerequisites: PES 215.

**PES 328 Sport Analytics II 3(3-0)**

Sport Analytics II enhances theory, development, and application of quantitative data. The analytics field in the sport industry has seen significant growth through technological advancements. Prerequisites: PES 218QR for Sport Management Majors/Minors (with a minimum grade of B-); students from other areas of academic study across campus may also be admitted to the course if they have completed a 200-level QR course with a grade of B- or higher.

**PES 330 Human Movement Studies 3(3-0)**

An integrated study of human movement including principles and assessment of applied human movement, and mechanical principles and movement patterns related to sport skills. Prerequisite: HSC 211.

**PES 335 Principles of Effective Coaching Instruction 3(3-0)**

Principles of effective instruction as they apply to assisting athletes in becoming proficient performers. This course may be offered in online format. Pre/Co-requisite: PES 255.

**PES 338 Teaching Group Fitness 2(2-0)**

Presents the basic methods used in teaching current group fitness techniques. Prerequisites: HSC 211 or HSC 214, 215; One of: PED 186, PES 186, HSC 106.

**PES 347 Organization and Administration of Special Olympic Games 3(3-0)**

Study of the philosophy, organization, and administration of the Special Olympics, with emphasis on the Michigan Games. Class participants assume administrative roles for the annual games.

**PES 360 Sport Sales & Marketing 3(3-0)**

An in-depth study of the nature, scope and significance of sales and marketing within the sport industry. Prerequisites: PES 119, PES 180 both with a B- or better.

**PES 364 Sports Officiating 1-6(Spec)**

Theoretical and practical experience in officiating high school sports. Fall: football, basketball, soccer; Spring: track and field, baseball, softball, volleyball; other sports on demand.

**PES 373 Esport in Society 3(3-0)**

*This course examines the sociological factors that influence esport in our society. This course may be offered in an online format. Prerequisite: 56 Credits. (University Program III-B: Studies in Social Structures)*

**PES 380 Sport Communication & Mass Media 3(3-0)**

Students are provided theory and concepts to examine the role of public relations, communication, and mass media in the sport industry. Prerequisites: PES 119, PES 180 both with a B- or better.

**PES 387 Physical Education for the Physically Impaired 3(2-2)**

Description of orthopedic and physical impairment. Interrelationships of physical, social, and emotional aspects. Development of activity experiences that are appropriate for specific impairments. Prerequisite: PES 386.

**PES 390 Practicum in Physical Education and Coaching 1-3(Spec)**

Offers the student an opportunity to assist in on-campus and off-campus experiences in the areas of sport, dance, intramurals or aquatics, etc. CR/NC only. Prerequisites: Permission of the department chairperson and PES 311, 560; HSC 205 for students who are receiving credit for an athletic coaching minor or an athletic coaching endorsement. Permission of the department chairperson and PES 215 for students receiving elective credit for physical education major or minors.

**PES 391 Independent Study 1-6(Spec)**

Independent research on a special problem or problems. CR/NC only. Prerequisite: permission of department chairperson.

**PES 395 Pre-Student Teaching Field Experience 1(Spec)**

Students observe an experienced physical educator and perform teaching functions under the direction of an elementary, middle, or high school teacher. CR/NC only. Prerequisites: PES 315; Admission to Teacher Education.

**PES 405 Physical Education Peer-Tutor Teaching 2(1-1)**

Physical education majors plan for and teach selected sports skills to prospective physical education majors/minors seeking to pass required sports skills competencies. Prerequisites: PES 315; Passing Score on SSCAP Test.

**PES 406 Evaluation in Physical Education and Sport 2(2-0)**

Selection, criteria, methods, and procedures used in assessing the psychomotor, cognitive, affective, and health-related physical fitness domains in K-12 physical education. Prerequisite: PES 215.

**PES 410 Competition Oriented Strategies and Preparations 2(2-0)**

Specific strategies and tactics that prepare individuals or teams for maximizing their performance in athletic competition. This course may be offered in an online format. Prerequisites: PES 255.

**PES 415 Planning, Teaching, and Assessing: Practical Applications 3(3-0)**

Practical experience in planning, teaching, and assessing school children. Prerequisite: PES 315, 406.

**PES 445 Athletic Season Planning and Evaluation 2(2-0)**

Prepares coaches to plan in-and out-of-season activities, and provides them with the tools they need to evaluate program strengths and weaknesses. This course may be offered in an online format. Pre/Co-requisite: PES 410.

**PES 470 Athletic Coaching Internship 3(Spec)**

A practical experience in coaching athletes in a competitive setting at any level of competition under the supervision of a superior. This course may be offered in an online format. Prerequisite: PES 445.

**PES 480 Integration of Sport Management Theory & Practice 3(Spec)**

A capstone experience for sport management majors, including fundraising, event management, strategic planning, game day operations, leadership, problem solving, sales, and communication. Prerequisites: PES 119, PES 180, and PES 293, all with grade of B- or better; PES 218QR, PES 280, PES 360, and PES 380 all with a grade of C or better; minimum 86 credit hours (senior status).

**PES 483 Physical Education for the Mentally Impaired 3(2-2)**

Planning of movement experience appropriate for the mentally impaired, neurologically impaired, and emotionally disturbed. Prerequisite: PES 386.

**PES 485 Theoretical Foundations of Strength and Conditioning 3(3-0)**

Theory and application of physiological, biomechanical, psychological components of physical performance needed to analyze, develop and implement strength and conditioning programs. NSCA standards and guidelines. Prerequisite: One of: HSC 211 or HSC 214, 215.

**PES 490 Practicum in Physical Education 1-3(Spec)**

Opportunity to work in the area of classroom experience, extra class activities, interscholastics, clubs, and organizations. CR/NC only. Prerequisites: application to the department chairperson must be made in the semester prior to the one in which affiliation credit is earned.

**PES 495 Senior Seminar in Physical Education 1(1-0)**

A capstone experience, prior to student teaching, designed to integrate required physical education subject matter through case study, discussion, role playing, and organization of materials. CR/NC only. Prerequisite: minimum of 90 semester hours completed.

**PES 499 Internship in Sport Management 1-12(Spec)**

Provides practical experience in a select sport-related organization. Students enroll in 1 to 12 credits. A minimum of 400 clock hours is required (9 credit hours to meet course requirements). Prerequisites: PES 318, 360, 380 all with a C or better; PES 393 with a B- or better; minimum 86 credits (senior status), and permission of the sport management internship coordinator.

**PES 508 Education on Sexual Aggression for School/Community 3(Spec)**

This course addresses the realities of sexual aggression, and how schools, corporations, and communities can educate their respective populations on these topics. Identical to HSC 508. Credit may not be earned in more than one of these courses.

**PES 525 International Travel Course in Sport 3(3-0)**

A study abroad course that investigates the components of sport management from an international perspective, including historical and cultural influences on sport. Prerequisites: Permission of instructor.

**PES 550 Sport Fundraising 3(3-0)**

Provides theoretical and practical applications of fundraising in the sport industry. This course may be offered in an online or hybrid format. Prerequisites: Minimum 86 credit hours (senior status); or graduate status.

**PES 564WI Sport Governance: Ethics, Morals, & Values 3(3-0)**

Investigation of how ethics, morals, and values influence the interpretation of laws and adherence to rules governing sport competition by athletes, coaches, and administrators. Writing Intensive. Prerequisites: PES 119, 180, and 293 with a B- or better; PES 218QR, 280, and 318 with a C or better; PES 360 or 380 with a C or better; minimum of 86 credits; or graduate status.

**PES 570 Advanced Coaching in Basketball 2(2-0)**

Study of most recent basketball trends and new techniques, methods, and philosophies in the coaching of basketball.

**PES 572 Advanced Coaching in Baseball 2(2-0)**

Coaching philosophy, new techniques and drills, practice organization, coaching duties, and strategy. Prerequisite: PES 372.

**PES 574 Advanced Coaching of Football 2(2-0)**

Study of recent changes and new trends in coaching of football.

**PES 592 Independent Reading 1(Spec)**

Exploration of one or more aspects of the field of physical education by individual study. Prerequisite: Permission of the department chairperson and instructor required.

**PES 595 Issues in Physical Education and Sport 1-6(Spec)**

Investigation of selective major issues in physical education and sport. Prerequisite: permission of the instructor.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**PES 602 Sport Event Management: Theory & Application 3(Spec)****PES 603 Administration of Sport and Athletics 3(3-0)****PES 606 Motor Learning and Human Performance 3(3-0)****PES 607 Physical Education Curriculum Analysis 3(3-0)****PES 610 Philosophical & Ethical Issues in Athletics 3(3-0)****PES 611 Psychology of Sport 3(3-0)****PES 615 Analysis of Teaching in Physical Education 3(3-0)****PES 619 Continuing Registration for Final Research Project 1(1-0)****PES 620 Sport - An Interdisciplinary Study 3(3-0)****PES 625 Athletic Facility Design and Management 3(3-0)****PES 631 Physiology of Exercise 4(3-2)****PES 635 Quantitative Applications & Data Based Decision Making in Sport 3(3-0)****PES 640 Sport and the Law 3(3-0)****PES 645 Financial Management of Sport 3(3-0)****PES 650 Sport Marketing 3(3-0)****PES 660 Biomechanics 3(3-0)****PES 665 Applied Research in Sport Management 3(3-0)****PES 670 Research Methods for Physical Education and Sport, Health and Recreation 3(3-0)****PES 672 Statistics for Physical Education and Sport, Health and Recreation 3(3-0)****PES 675 Human Resource Management in Sport Organizations 3(3-0)****PES 685 Integrated Capstone Project in Sport Management 3(Spec)****PES 690 Practicum 1-4(Spec)****PES 691 Independent Study 3(Spec)****PES 693 Field Study in Physical Education and Sport 1-6(Spec)****PES 696 Seminar in Physical Education 2(2-0)****PES 698 Thesis 1-6(Spec)****PES 699 Internship in Sport Management 1-6(Spec)****PES 703 Advanced Independent Reading 1-2(Spec)****PES 791 Independent Study 2(Spec)**

## PHA - Physician Assistant

See the School of Rehabilitation and Medical Sciences for more information. For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

- PHA 608 Clinical Medicine I 4(4-0)**
- PHA 609 Clinical Medicine II 4(4-0)**
- PHA 610 Clinical Medicine III 3(3-0)**
- PHA 612 Obstetrics/Gynecology 3(3-0)**
- PHA 614 Pediatrics 3(3-0)**
- PHA 616 Surgery 2(2-0)**
- PHA 618 Emergency Medicine 2(2-0)**
- PHA 619 Continuing Registration for Final Research Project 1(1-0)**
- PHA 620 Infectious Diseases 3(3-0)**
- PHA 624 Issues in Practice 2(2-0)**
- PHA 625 Clinical Pharmacology I 3(3-0)**
- PHA 626 Clinical Pharmacology II 3(3-0)**
- PHA 630 Clinical Procedures I 3(2-2)**
- PHA 631 Clinical Procedures II 3(0-6)**
- PHA 633 Scientific Basis of Medicine I 2(2-0)**
- PHA 634 Scientific Basis of Medicine II 2(2-0)**
- PHA 635 Scientific Basis of Medicine III 2(2-0)**
- PHA 640 Clinical Problem Solving I 3(1-2)**
- PHA 641 Clinical Problem Solving II 3(0-11)**
- PHA 642 Clinical Problem Solving III 3(0-11)**
- PHA 645 Critical Appraisal of Medical Literature and Evidence-Based Medicine 2(2-0)**
- PHA 650 Diagnostic Tests I 2(1-2)**
- PHA 651 Diagnostic Tests II 2(2-0)**
- PHA 652 Diagnostic Tests III 2(1-2)**
- PHA 660 History and Physical Examination I 3(2-2)**
- PHA 661 History and Physical Examination II 3(2-2)**
- PHA 662 History and Physical Examination III 4(2-4)**
- PHA 671 Preventive Medicine 1(1-0)**
- PHA 672 Applied Ethics for Physician Assistants 2(2-0)**
- PHA 673 Psychiatry 3(3-0)**
- PHA 690 Clinical Education I 16(Spec)**
- PHA 691 Clinical Education II 16(Spec)**
- PHA 692 Clinical Education III 16(Spec)**
- PHA 694 Clinical Clerkship Remediation 3-9(Spec)**
- PHA 697 Special Topics for Physician Assistants 1-9(Spec)**

## PHL - Philosophy

See the Department of Philosophy, Anthropology, and Religion for more information.

- PHL 100 Introduction to Philosophy 3(3-0)**  
Study of the basic issues and methods of philosophy. Depending on instructor, it may have either a problem or a historical orientation. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)
- PHL 102 The Meaning of Life 3(3-0)**  
Exploring religious and nonreligious ways that humans from diverse societies find value or meaning in human life and propose to live it well. May be offered as Writing Intensive. Identical to REL 102. Credit may not be earned in more than one of these courses. (University Program Group I-A: Humanities: Human Events and Ideas)
- PHL 105 Critical Thinking in Everyday Life 3(3-0)**  
Designed to help the student think clearly, evaluate arguments, and develop a sensitivity to language. Emphasis is on the development of skills rather than theories.
- PHL 118 Moral Problems 3(3-0)**  
Study of basic moral problems and proposed solutions to problems associated with violence, oppression, prejudice, and sex. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)
- PHL 128 Philosophical Perspectives on Poverty & Economic Injustice 3(3-0)**  
A philosophical examination of poverty and economic inequality; addresses questions of the moral justification of inequality, economic injustice, and poverty as a form of oppression. (University Program Group IV-A: Studies in Discrimination)
- PHL 140 Introduction to Symbolic Logic 3(3-0)**  
A study of modern formal logic, with emphasis on the development of general procedures for deciding whether any argument is correct. (University Program Group II-B: Quantitative and Mathematical Sciences)
- PHL 141QR Introduction to Logical Problem Solving 3(3-0)**  
An introduction to logic, with a focus on its applications. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Sciences)

### PHL 145QR Chances, Choices, and Everyday Reasoning 3(3-0)

A study of modern inductive reasoning, with emphasis on causal reasoning, probabilities, and decision theory as they relate to daily life. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Sciences)

### PHL 158 Introduction to Environmental Ethics and Justice 3(3-0)

A study of environmental ethics and justice, with emphasis on the contribution of environmental problems to the oppression of marginalized groups. May be offered as Writing Intensive. (University Program Group IVA Studies in Discrimination)

### PHL 200 History of Philosophy: Classical Period 3(3-0)

Course focuses on "Athenian School" of the classical period, with heavy emphasis on Socrates, Plato and Aristotle, and some emphasis on the Pre-Socratic philosophers. Recommended: Any PHL course.

### PHL 205 American Philosophy 3(3-0)

Historical study of the development and distinctive themes of American philosophy from colonial times to the present. Emphasis on Pierce, William James, and John Dewey.

### PHL 218 Ethical Theories 3(3-0)

Surveys philosophical theories about right and wrong, the good life, and the nature and justification of morality. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

### PHL 225 Foundations of Cognitive Science 3(3-0)

Introduction to cognitive science, the problems it addresses, its evolving models of the mind, its interdisciplinary nature, and its broader ramifications. Identical to PSY 225. Credit may not be earned in more than one of these courses.

### PHL 230 Philosophy of Religion 3(3-0)

The philosophical study of the meaning and justification of religious claims, including those about the nature and existence of God and human immortality. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

### PHL 286 Philosophy in Literature 3(3-0)

Philosophical themes in selected literary works from ancient, medieval, modern, or contemporary sources.

### PHL 297 Special Topics in Philosophy 1-12(Spec)

Study of areas in philosophy not included in courses currently listed in catalog.

### PHL 300 History of Philosophy: Medieval Period 3(3-0)

Faith, reason and logic in the Moslem, Jewish, and Christian perspectives during the Middle Ages.

### PHL 302 History of Philosophy: Modern Period 3(3-0)

Major philosophers during the Scientific Revolution and Enlightenment, such as Descartes, Locke, Berkeley, Hume, Reid, Kant, Hobbes, Malebranche, Spinoza and Leibniz. Recommended: PHL 200; 56 credit hours.

### PHL 305 Chinese Philosophy 3(3-0)

A survey of Chinese philosophy from the earliest times to the modern period, with emphasis on major thinkers and schools.

### PHL 311 Human Nature, Human Rights 3(3-0)

A philosophical examination of classical theories of human nature and how these theories have shaped the development of the Universal Declaration of Human Rights. Recommended: One course in philosophy.

### PHL 312 Philosophy of Humanitarian Law 3(3-0)

Exploration of philosophical and moral principles underlying the Geneva Conventions and other international laws aimed at reducing suffering and protecting human dignity during armed conflict. Recommended: One course in philosophy.

### PHL 313 Justice, Human Rights, and the Philosophy of Nonviolence 3(3-0)

Focusing on questions of social and political philosophy, this course asks what we can learn from nonviolent movements about justice, power, democracy and human dignity. May be offered as Writing Intensive. Recommended: One course in philosophy.

### PHL 318 Business Ethics 3(3-0)

Application of ethical principles to such business issues as fair competition, employee obligations, and business's responsibilities to stockholders, customers, employees, community, and society.

### PHL 320 Theory of Knowledge 3(3-0)

The study of skepticism, the justification of beliefs, and theories of knowledge. May be offered as Writing Intensive. Prerequisites: PHL 100 or 140.

### PHL 325 Philosophy of Mind 3(3-0)

An attempt to explain the nature of the mind, by examining philosophical works on the mind-body problem and by surveying empirical results. Recommended: Any PHL course. (University Program Group I-A: Human Events and Ideas)

### PHL 328 Animal Ethics 3(3-0)

Study of ethical issues, both theoretical and applied, related to human interactions with animals. Recommended: One course in PHL.

### PHL 335 Philosophy of Psychology 3(3-0)

An introduction to central areas of concern in the philosophy of psychology and/or the philosophy of psychiatry. May be offered as Writing Intensive. Prerequisite: One course in philosophy. Recommended: One course in psychology.



**PHL 338 Medical Ethics 3(3-0)**

Philosophical exploration of ethical issues in health care, such as the client-professional relationship, medical resource distribution, research ethics, organ allocation, end-of-life issues. Recommended: PHL 118 or PHL 218.

**PHL 340 Advanced Symbolic Logic 3(3-0)**

First order quantificational theory is presented as a paradigm of formal theories. In terms of this, some metatheoretic notions are introduced. Prerequisite: PHL 140 or PHL 141QR.

**PHL 345 The Civil Rights Movement 3(3-0)**

*Examines the civil rights movement from 1954 to 1980s; based on PBS series: Eyes on the Prize. Identical to PSC 325, REL 345, SOC 345. Credit may not be earned in more than one of these courses. Prerequisites: Any one of the following: HST 110, HST 111, HST 112, LAR 145, PSC 100, PSC 105, PSC 125, REL 140, SOC 100. (University Program Group IV-C: Studies in Racism and Diversity in the United States)*

**PHL 348 Decision Theory 3(3-0)**

An introduction to the central topics of decision theory, including decisions under certainty, ignorance, and risk, the nature of utility, basic probability, and the fundamentals of game theory. Prerequisite: One course in philosophy.

**PHL 390 Philosophy of Science 3(3-0)**

Study of problems that arise in a critical examination of science: explanation, theory, confirmation, law, measurement, scientific change. Prerequisite: one course in PHL. Recommended: PHL 140 or 141QR.

**PHL 397 Special Topics in Philosophy 1-12(Spec)**

Study of areas of philosophy not included in courses currently listed in catalog. May be offered as Writing Intensive. Prerequisite: 3 credit hours in philosophy.

**PHL 403 History of Philosophy: Nineteenth Century 3(3-0)**

Analysis of philosophical texts selected from the work of thinkers such as Hegel, Marx, Kierkegaard, and Nietzsche. Prerequisites: at least three (3) credit hours in the history of philosophy.

**PHL 404 Twentieth Century Philosophy 3(3-0)**

A study of some of the important philosophical trends since 1900. May be offered as Writing Intensive. Prerequisite: PHL 100 or 140.

**PHL 405 Major Philosophers 3(3-0)**

An in-depth study of a major philosopher. Prerequisite: At least one of the following: PHL 200, 300, 302, 403, 404.

**PHL 410 Philosophy of Law 3(3-0)**

Consideration of such questions as: What is a legal system, a law, a legal right? What is the relation among law, morality, and custom?

**PHL 418 Advanced Moral Philosophy 3(3-0)**

An advanced study of contemporary moral theory, meta-ethics, and the methodology of constructing and evaluating ethical theories. May be offered as Writing Intensive. Prerequisite: PHL 218.

**PHL 421 Philosophy of Language 3(3-0)**

Study of structure of language, relations between language and reality, and interrelations among language, thought, and culture. Prerequisite: PHL 100, PHL 140.

**PHL 422 Political and Social Philosophy 3(3-0)**

Fundamental questions of political life, e.g., How does power operate within and between societies? What principles should we use to evaluate social/political institutions? May be offered as Writing Intensive.

**PHL 426 Feminist Theory 3(3-0)**

Examination of theories that describe and criticize the social, cultural and political status of women and offer alternatives to the status quo. Identical to WGS 426 and PSC 426. Credit may not be earned in more than one of these courses. Recommended: one course in philosophy or one of PSC 275, 326, 371, 372, 373, 378.

**PHL 480 Philosophy of the Arts 3(3-0)**

Studies in the experience of arts and discussion of traditional and contemporary aesthetics. May be offered as Writing Intensive.

**PHL 490WI Senior Seminar in Philosophy 3(3-0)**

A senior seminar for philosophy majors. Writing Intensive. Prerequisites: Philosophy Majors with senior status or junior status with permission of the instructor; at least 21 hours in Philosophy.

**PHL 497 Special Topics in Philosophy 1-12(Spec)**

Study of areas in philosophy not included in courses currently listed in catalog. May be offered as Writing Intensive. Prerequisite: 3 credit hours in philosophy.

**PHL 498 Independent Research 1-6(Spec)**

Independent study of selected philosophical topic(s) or work(s). Prerequisite: permission of instructor.

**PHL 518 Professional Ethics 3(3-0)**

An examination of the theories and methods used in ethical decision-making: with application to common issues in law, journalism, technology, research, education, and the health professions. Prerequisite: junior status.

**PHL 598 Readings in Philosophy 1-6(Spec)**

Selected studies of one or more philosophic works. Prerequisite: permission of instructor.

**PHS - Physical Science**

See the Department of Physics for more information.

**PHS 101 Survey of Physical Science 3(3-0)**

*Introduction to the nature of the physical universe, the concepts and methods of physical science, and the history of scientific ideas. Developed through lectures and demonstrations. (University Program Group II-B: Quantitative and Mathematical Sciences)*

**PHS 151QR Introductory Physical Science I 3(2-2)**

*Introduction to the concepts and methods of physical science. Students are encouraged to draw conclusions from desktop experiments. Recommended for non-science majors. Satisfies University Program Group II laboratory requirement. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Sciences)*

**PHS 251 Introductory Physical Science II 3(2-2)**

Continuation of PHS 151. The physical science of solid matter with emphasis on models of atoms and molecules. Prerequisite: PHS 151.

**PHS 265QR Quantitative Physical Science 2(1-3)**

Concepts and quantitative methods of physical science. Recommended for prospective elementary school teachers. Quantitative Reasoning. Prerequisite: MTH 152 (with a grade B- or better).

**PHS 563 Physical Science Practicum 2(Spec)**

Practical experience in all aspects of teaching a physics class with a laboratory component. Prerequisite: permission of instructor.

**PHY - Physics**

See the Department of Physics for more information.

**PHY 100 Conceptual Physics 3(3-0)**

*An exploration of physical concepts; their social and philosophical implications; and the utility and limitations of physics for solution of problems in the modern world. The mathematical level will be that of beginning high school algebra. Not intended for potential science majors. (University Program Group II-B: Quantitative and Mathematical Sciences)*

**PHY 105QR Energy and Society: A Quantitative Perspective 3(3-0)**

Understanding current and future energy problems using quantitative reasoning techniques. Topics covered span a range from the personal to the societal. Quantitative Reasoning.

**PHY 110 Physics of Sports 3(3-0)**

*For students interested in physics of motion. Covers velocity, acceleration, force and momentum, as related to physical activity. (University Program Group II-B: Quantitative and Mathematical Sciences)*

**PHY 127 Table Top Physics 1(0-2)**

*Laboratory experience for students in PHY 100, PHY 110, or PHS 101. Hands-on group laboratory to investigate basic concepts in introductory physics. Satisfies University Program Group II laboratory requirement. Pre/Co-requisite: PHY 100 or 110 or PHS 101. (University Program Group II-B: Quantitative and Mathematical Sciences)*

**PHY 130QR College Physics I 4(4-0)**

*Mechanics, heat, kinetic theory, and sound. The mathematics used is algebra and trigonometry. The sequences PHY 130-131, PHY 170-171 satisfy minimum requirements for medical and dental schools. Quantitative Reasoning. Recommended: A high school math background that includes a good foundation in algebra and trigonometry, or MTH 109. (University Program Group II-B: Quantitative and Mathematical Sciences)*

**PHY 131 College Physics II 4(4-0)**

A continuation of PHY 130 that covers the topics of electricity, magnetism, optics and modern physics. Prerequisite: PHY 130.

**PHY 145QR University Physics I 4(4-0)**

Normally the first physics course for majors and minors. Mechanics of single and many-particle systems, conservation laws, statistical concepts, and gravitational interaction. Quantitative Reasoning. Pre/Co-requisite: MTH 132.

**PHY 146 University Physics II 4(4-0)**

Temperature and thermodynamics, electromagnetic interaction, electrical circuits, electromagnetic radiation, and optics. Not open to those with credit in PHY 131. Prerequisite: PHY 145. Pre/Co-requisite: MTH 133.

**PHY 170 College Physics Laboratory I 1(0-2)**

*Experimental techniques of physics introduced by studying quantitative situations through error analysis, graphical analysis, small computer calculations, and fitting data to model functions. Laboratory experience for PHY 130. Satisfies University Program Group II laboratory requirement. Pre/Co-requisite: PHY 130. (University Program Group II-B: Quantitative and Mathematical Sciences)*

**PHY 171 College Physics Laboratory II 1(0-2)**

Laboratory experience for PHY 131. Introductory experimental techniques and instrumentation for electrical, optical, and nuclear phenomena. Prerequisite: PHY 170. Pre/Co-Requisite: PHY 131.

**PHY 175 University Physics Laboratory I 1(0-2)**

*Laboratory experience for PHY 145. Introduction to experimental techniques and the treatment of experimental data. Satisfies University Program Group II laboratory requirement. Pre/Co-requisite: PHY 145. (University Program Group II-B: Quantitative and Mathematical Sciences)*



# 412 Course Descriptions

## PHY 176 University Physics Laboratory II 1(0-2)

Laboratory experience for PHY 146. Introduction to electrical measurements and instrumentation. Introduction to techniques of optical measurements. Prerequisite: PHY 175. Pre/Co-Requisite: PHY 146.

## PHY 180 Special Topics in Physics 1-6(Spec)

Special topics not included in standard courses in physics. Course may be taken for credit more than once; total credit not to exceed six hours.

## PHY 210 Spacetime Physics 1(1-0)

Special relativity and a taste of general relativity for inquiring minds. Intended for prospective physics or mathematics majors. Prerequisite: PHY 145.

## PHY 212QR Games, Science, and Probability 3(2-2)

*Introduction to elementary probabilistic concepts by exploring ancient and modern games as they relate to decision making. Simple computations will aid the experimental component. Identical to MTH 212QR and STA 212QR. Credit may not be earned in more than one of these courses. Quantitative Reasoning. Prerequisites: MTH 105 or 107 or 109 or 113 or 130 or 132 or 133. (University Program Group II-B: Quantitative and Mathematical Sciences)*

## PHY 247QR Introduction to Modern Physics 3(3-0)

Historical development of modern physics; introduction to special relativity, atomic structure, and elementary quantum theory. Quantitative Reasoning. Prerequisites: PHY 146 or 131; MTH 132. Recommended: MTH 133.

## PHY 252 Modern Concepts in Nuclear and Particle Physics 1(1-0)

Introduction to nuclear radioactivity, production of super-heavy elements, nuclear reactions and nuclear energy, stellar evolution, and the Standard Model of particle physics. Prerequisite: PHY 247.

## PHY 254 Lasers: Basic Principles and Practical Applications 1(1-0)

An introduction to lasers and their applications for science and engineering students. Prerequisite: PHY 146.

## PHY 256 Excursions into Condensed Matter 1(1-0)

An introduction to several topics in condensed matter physics for science and engineering majors. Prerequisite: PHY 247.

## PHY 277 University Physics Laboratory III 1(0-3)

Laboratory experience for PHY 247. Introduction to the techniques of electron and photon physics. Pre/Co-Requisite: PHY 247.

## PHY 280 Special Topics in Physics 1-6(Spec)

Special topics not included in standard courses in physics. Course may be taken for credit more than once; total credit not to exceed six hours. Prerequisites: PHY 145, 175.

## PHY 294 Computation in Physics 1(0-2)

Laboratory experience using basic computational tools and techniques that are important in modern physics research. The course expands on physics concepts through numerical experimentation. Prerequisite: PHY 145. Pre/Co-requisite: MTH 133. Recommended: MTH 223.

## PHY 312 Introduction to Mathematical Physics 3(3-0)

Introduction to mathematical concepts and techniques required to understand classical mechanics, electromagnetism, and quantum mechanics. Pre/Co-Requisites: PHY 247QR; MTH 233, 334.

## PHY 322 Intermediate Mechanics 3(3-0)

Newtonian mechanics of particles and systems of particles: conservation theorems, gravitation, oscillations, central force motion, Lagrangian and Hamiltonian dynamics, and two-particle collisions. Pre/Co-requisites: PHY 247; MTH 233, 334.

## PHY 332 Electricity and Magnetism 3(3-0)

Electrostatic fields in vacuum and in dielectrics, magnetic fields associated with constant and variable currents, magnetic materials, Maxwell's equations. Prerequisite: PHY 247; MTH 233, 334.

## PHY 380 Special Topics in Physics 1-6(Spec)

Special topics not included in standard courses in physics. Course may be taken for credit more than once; total credit not to exceed six hours. Prerequisites: See Course Search and Registration.

## PHY 442 Introductory Quantum Theory 4(4-0)

Introduction to quantum theory, Schrödinger equation, operators, angular momentum, harmonic oscillator, atomic hydrogen, perturbation theory, identical particles, radiation. Some applications will be considered. Prerequisites: PHY 312, 322, 332.

## PHY 450 Thermal Physics 3(3-0)

Introduction to equilibrium thermodynamics and elementary statistical mechanics. Prerequisite: PHY 312, PHY 322.

## PHY 480 Special Topics in Physics 1-6(Spec)

Special topics not included in standard courses in physics. Course may be taken for credit more than once; total credit not to exceed six hours. Prerequisite: PHY 332.

## PHY 490 Independent Study 1-6(Spec)

Individual study in an area not covered by regular courses. May be taken for credit more than once; total credit not to exceed six hours. Prerequisite: PHY 332 and permission of instructor.

## PHY 491WI Senior Physics Project 3(Spec)

Capstone experience for physics majors. Students enroll during their penultimate semester on campus. Writing Intensive. Prerequisites: PHY 312, 322, 332, 578. Prior permission of instructor.

## PHY 501 Careers in the Physical Sciences 1(0-2)

Career planning and job application skills for students in physics, astronomy, or a closely related area. Prerequisite: Completion of at least 20 credit hours of coursework in the physical sciences or mathematics, or admission to the PHY M.S. program.

## PHY 505 Teaching Chemistry and Physics in the Secondary School 3(3-0)

This course exposes pre-service secondary chemistry and physics teachers to theory and practice of teaching in secondary schools, design of instructional units, and safety practices. Must be completed prior to student teaching. Identical to CHM 505. Credit may not be earned in more than one of these courses. Prerequisites: CHM 132; PHY 131 or 146; admission into the Teacher Education Program; signed major or minor in chemistry or physics (secondary education); Junior or Senior standing. Graduate students must be enrolled in a teaching master's program.

## PHY 507 Field Experience in Teaching Chemistry/Physics 1(Spec)

Supervised experience in high school chemistry and/or physics classes. Identical to CHM 507. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: admission into the Teacher Education Program; Junior or Senior standing. Graduate students must be enrolled in a teaching master's program. Pre/Co-requisite: CHM 505 or PHY 505.

## PHY 511 Fundamentals of Quantum Computing 2(2-0)

This course introduces the fundamental concepts of quantum information technology and quantum computing. This course may be offered in an online or hybrid format. Prerequisites: PHY 247 and junior standing or higher; or graduate standing in Physics.

## PHY 517 Computational Physics 3(2-2)

Introduction to standard numerical techniques applied to problems in physics, including numerical differentiation and integration, systems of differential equations, eigenvalues and eigenvectors, and Monte-Carlo simulations. Prerequisites: MTH 233; or graduate standing. Pre/Co-requisites: PHY 322, MTH 334; or graduate standing. Recommended: Basic knowledge of a programming language such as FORTRAN, Java, C, Python, or others.

## PHY 552 Nuclear Physics 3(3-0)

Radioactive transformations, detection of radiation, methods of producing high-speed particles, nuclear structure, fission, cosmic radiation and applications of radioactivity. Prerequisite: PHY 442 or graduate standing in Physics.

## PHY 554 Optics 3(3-0)

Geometrical and physical optics, electromagnetic theory of light, interference and diffraction from standpoint of Huygens' principle, Fourier formalism, polarized light, principles and applications of lasers. Prerequisites: PHY 332.

## PHY 556 Solid State Physics 3(3-0)

Vibrational and electronic properties of crystalline materials as well as more specialized selected topics such as magnetism, optical, and transport properties. Prerequisites: PHY 442 or graduate standing in Physics. Pre/Co-requisites: PHY 450 or graduate standing in Physics.

## PHY 578WI Experimental Physics 3(1-5)

Selected experiments utilizing the techniques of modern experimental physics. Writing Intensive. Prerequisites: PHY 277, PHY 322 or graduate standing in Physics. Pre/Co-requisites: PHY 332 or graduate standing in Physics.

## PHY 580 Special Topics 1-9(Spec)

Special topics not included in standard courses in physics. Course may be taken more than once; total credit not to exceed six hours. Prerequisite: PHY 442 or graduate standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

## PHY 614 Methods of Theoretical Physics 3(3-0)

## PHY 619 Continuing Registration for Final Research Project 1(1-0)

## PHY 624 Advanced Mechanics 3(3-0)

## PHY 634 Advanced Electricity and Magnetism 3(3-0)

## PHY 643 Quantum Mechanics I 3(3-0)

## PHY 644 Quantum Mechanics II 3(3-0)

## PHY 685 Seminar: Contemporary Physics 1-4(Spec)

## PHY 698 Plan B Project 1-2(Spec)

## PHY 780 Topics in Physics 1-9(Spec)

## PHY 781 Topics in Nuclear Physics and Astrophysics 1-6(Spec)

## PHY 782 Topics in Condensed Matter Physics 1-6(Spec)

## PHY 790 Independent Study 1-6(Spec)

## PHY 796 Directed Research in Physics 1-36(Spec)

## PHY 798 Thesis 1-6(Spec)

## PHY 899 Dissertation 1-12(Spec)

# POR - Portuguese

*See the Department of History, World Languages, and Cultures for more information.*

## POR 105 Accelerated Elementary Portuguese 4(4-0)

*Designed for students who have had no or little Portuguese. Covers all four basic language and communicative skills. Introduction to the culture of Portuguese-speaking countries. This course may be offered in an online format. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

## PSC - Political Science

See the School of Politics, Society, Justice, and Public Service for more information.

### PSC 100 Introduction to Political Science 3(3-0)

An introduction to the historical and theoretical concepts and subject matter of political science, required for all political science majors and minors. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

### PSC 101 Political Behavior 3(3-0)

Focus is on the elements of individual political behavior. Includes rational choice; political involvement, commitment, and participation; elections and voting behavior; and political opinion. May be offered as Writing Intensive. (University Program Group III-A: Behavioral Sciences)

### PSC 105 Introduction to American Government and Politics 3(3-0)

Examines the formal institutions of government and how politics actually works in the United States: civil rights, civil liberties, elections, media, interest groups and more. This course may be offered in an online format. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

### PSC 125 African-American Politics 3(3-0)

Examines issues of political economy, political participation, political efficacy, alienation, Black Nationalism, PanAfricanism and institutional, ideological and individual racism. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

### PSC 150 Introduction to International Relations 3(3-0)

Introduction to theoretical tools used in the field of international relations. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

### PSC 151 The U.S. and the World 3(3-0)

Prepares the student to confront the issues to be faced as a citizen of the US and as a member of the global society. (University Program Group III-B: Studies in Social Structures)

### PSC 242 Introduction to Comparative Politics 3(3-0)

An examination of relevant theories, concepts, and methods of comparative political analysis and application of these in the study of selected political systems. (University Program Group III-B: Studies in Social Structures)

### PSC 261 State and Local Government 3(3-0)

Structure and functions of states, cities and counties, with emphasis on Michigan. May be offered as Writing Intensive. This course may be offered in an online format. (University Program Group III-B: Studies in Social Structures)

### PSC 275 Great Political Thinkers 3(3-0)

Discussion of vital issues in the history of Western political thought, such as freedom, justice, equality, and power. Authors include Plato, Aristotle, Machiavelli, Marx. (University Program Group I-A: Human Events and Ideas)

### PSC 280QR Introduction to Empirical Methods of Political Research 3(3-0)

Empirical political research techniques including the scientific method, measurement, descriptive and inferential statistics, literature reviews, data collection, computer assisted data analysis, and research reporting. Quantitative Reasoning. This course may be offered in an online format. Prerequisites: PSC 100, 105, or 150; one other political science course.

### PSC 300 Michigan Politics and Elections 3(3-0)

Analysis of Michigan's election campaigns with focus on organization, strategies and tactics. Emphasis on election consequences for state's policy leaders, opinion, interests and government. Prerequisite: PSC 105 or PSC 261.

### PSC 301 Law and Policy in Michigan State Government 3(3-0)

Analysis of Michigan's legislative process, policy issues, and state government politics. Emphasis on origination, shaping, negotiating, and content of state policy. Prerequisite: PSC 105 or PSC 261.

### PSC 305 Midtier Teaching in Political Science 2(1-2)

The midtier experience provides observations and small-group instructional opportunities for students seeking secondary certification in political science. Course includes both campus instruction and field work. CR/NC only. Prerequisites: completion of EDU 107; 12 hours of political science.

### PSC 320 The American Legislative Process 3(3-0)

Analysis of the legislative process, studying formal and informal devices used by legislative bodies in determining policy. Primary emphasis is on the United States Congress. Prerequisites: PSC 105.

### PSC 321 The American Chief Executive 3(3-0)

Development of the executive office of the United States, with emphasis on the Presidency.

### PSC 322 Judicial Process and Politics 3(3-0)

Focuses on the American judicial process, including federal and state courts, roles of judges and other actors, civil and criminal justice processes, and judicial policymaking. Recommended: PSC 100 or PSC 105.

### PSC 323 American Parties and Politics 3(3-0)

Analysis of American political parties as instruments of democratic government. Their structures, functions, and organizations, with emphasis on nomination, campaigns, and elections.

### PSC 325 The Civil Rights Movement 3(3-0)

Examines the civil rights movement from 1954 to 1980s; based on PBS series: *Eyes on the Prize*. Identical to PHL 345, REL 345, SOC 345. Credit may not be earned in more than one of these courses. Prerequisites: Any one of the following: HST 110, HST 111, HST 112, LAR 145, PSC 100, PSC 105, PSC 125, REL 140, SOC 100. (University Program Group IV-C: Studies in Racism and Diversity in the United States)

### PSC 326 Women and Politics 3(3-0)

This course will look primarily at empirical studies of women's role in politics in the U.S. but also in other contexts. Identical to WGS 326. Credit may not be earned in more than one of these courses. This course may be offered in an online format. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

### PSC 327 Lobbying and Interest Group Behavior 3(3-0)

The reasons for, and the methods of, lobbying government officials in the United States, with an emphasis on implications for democracy. Recommended: PSC 105.

### PSC 328 Campaigns and Elections 3(3-0)

Study of campaigns and elections in the United States, including candidate emergence and nominations, campaign organization and strategy, election results, and electoral reform.

### PSC 330 Study Abroad: Ancient Athens and Modern Greece 3(3-0)

Students travel to Greece (Athens, Delphi, Olympia, and elsewhere) to study politics, citizenship, and culture in ancient Athens and modern Greece. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

### PSC 340 African Political Systems and Processes 3(3-0)

Comparative survey of selected African political systems with focus upon Sub-Saharan Africa.

### PSC 344 East Asian Political Systems and Processes 3(3-0)

Emphasis on selected states in East Asia. East Asia consists of China, Japan, and Korea. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

### PSC 345 Middle Eastern Political Systems 3(3-0)

Comparative analysis of the politics of selected Middle Eastern states, including Egypt, Iraq, Saudi Arabia, Algeria, Jordan, Morocco, Iran, Israel and Turkey.

### PSC 346 The Politics of Islam 3(3-0)

Political examination of Islam's revival as a political doctrine that poses a unique reading of modernity, world peace and democracy in the 21st century.

### PSC 347 Europe and the European Union 3(3-0)

Comparative political analysis of selected European states and the European Union. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Global Cultures Outside of the Anglo-American Tradition)

### PSC 348 Latin American Political Systems 3(3-0)

A comparative analysis of politics in contemporary Latin America with focus on the impact of authoritarianism, international intervention, economic underdevelopment, and democratization. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

### PSC 351 International Relations 3(3-0)

Classical and contemporary theories of international relations. War, terrorism, and genocide. International law and organizations. Global economics and world poverty. Ethics in international relations.

### PSC 352 US - Latin American Relations 3(3-0)

An examination of the political, military, and economic relations between Latin America and the United States.

### PSC 353 Model United Nations 3(3-0)

Introduces students to the activities of the United Nations and the protocol and procedures of diplomacy in order to participate in United Nations simulations. Prerequisite: 26 credits completed.

### PSC 354 Advanced Model United Nations 1-6(1-0)

Allows advanced students to further their knowledge of the protocol and procedures of diplomacy and participate in United Nations simulations. Prerequisite: PSC 353. Co-requisite: PSC 355.

### PSC 355 Model United Nations Lab 1-9(Spec)

This course is a lab for PSC 353 and PSC 354. Can be repeated up to a total of nine credits. CR/NC only. Co-requisite: PSC 353 or 354.

### PSC 360 Trial Advocacy 3(3-0)

Practice conducting all stages of criminal and civil trials and gain a strong working knowledge of the judicial system, evidentiary rules, and methods of persuasion. Recommended: PSC 105.

### PSC 365 Criminal Law 3(3-0)

An introduction to the study of substantive criminal law, including the elements of crimes, defenses to crimes, criminal sanctions, and constitutional limits on criminal law. Identical to SOC 365. Credit may not be earned in more than one of these courses.

### PSC 370 Gurus, Avatars, and Nukes: South Asian Politics 3(3-0)

This course will introduce students to South Asian politics. It will examine the evolution of political institutions, ethnic conflicts, and political crises in the region. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**PSC 371 American Political Thought 3(3-0)**

*Selective survey of dominant trends in American political thought from the revolutionary era to the present. This course may be offered in an online or hybrid format. (University Program Group I-A: Human Events and Ideas)*

**PSC 372 American Radical Thought 3(3-0)**

Study and analysis of the main social revolutionary ideologies of the left during the past 100 years in the United States.

**PSC 375 Modern Ideologies 3(3-0)**

This course examines a number of different modern ideologies such as liberalism, socialism, fascism, conservatism, environmentalism, and radical Islamism.

**PSC 378 Modern Democratic Theory 3(3-0)**

*Exploration of modern arguments for and against liberal democracy and discussion of the future of liberal democracy in the U.S. and elsewhere. (University Program Group I-A: Human Events and Ideas)*

**PSC 381 Slavery, Tyranny, Democracy: Classical Origins of Modern Ideas 3(3-0)**

*This course examines the key concepts and authors of Greek and Roman political theory. Focus is on Plato and Aristotle. May be offered as Writing Intensive. Recommended: PSC 275. (University Program Group I-A: Human Events and Ideas)*

**PSC 390 Independent Study 1-6(Spec)**

Directed reading or research on an approved topic. Prerequisite: Open to students not on academic probation and who shall have completed 12 semester hours in political science, with the permission of the instructor.

**PSC 394 Practicum in Public Polling 1-12(Spec)**

This course provides experiential learning in the use of public opinion polling to facilitate democratic processes and governance. CR/NC only. Prerequisites: PSC 280 and permission of instructor.

**PSC 395 Internship in Government and Politics 1-12(Spec)**

An integrative learning experience where students apply textbook knowledge to governmental and public affairs work experience. CR/NC only. Prerequisite: permission of instructor.

**PSC 398 Special Topics in Political Science 3-9(3-0)**

Examines the role of public and nonprofit organizations in society. Covers special topics of interest not covered in existing courses. May be repeated when the content is not a duplication of a previous special topics offering. Prerequisite: Permission of the instructor.

**PSC 405 Methods for Teaching Political Science 3(3-0)**

Lesson plans, objectives evaluations, organization and methods of teaching government and politics. Three weeks of mid-tier experiences. Prerequisites: completion of at least 15 hours of political science course work; at least junior status.

**PSC 421 Constitutional Law: Powers of Government 3(3-0)**

Examines major U.S. Supreme Court decisions concerning judicial review, separation of powers, federalism, fiscal and commerce powers, and economic liberties.

**PSC 422 Constitutional Law: Civil Rights and Liberties 3(3-0)**

Examines major U.S. Supreme Court decisions regarding the First Amendment, criminal procedure, racial and gender equality, and the right to privacy.

**PSC 426 Feminist Theory 3(3-0)**

Examination of theories that describe and criticize the social, cultural and political status of women and offer alternatives to the status quo. Identical to WGS 426 and PHL 426. Credit may not be earned in more than one of these courses. Recommended: one course in philosophy or one of PSC 275, 326, 371, 372, 373, 378.

**PSC 453 American Foreign Policy 3(3-0)**

Analyzes the external interests of the United States and how they are pursued.

**PSC 501 Bullets not Ballots: Revolution, Insurgency and Civil War 3(3-0)**

This course examines the theory and literature on the causes of violent conflicts such as revolution, insurgency and civil war.

**PSC 513 Citizen Engagement in Public Life 3(3-0)**

This course examines trends in Americans' participation in public life, as well as various approaches intended to increase their civic and political engagement. This course may be offered in an online format. Prerequisite: PSC 105 or graduate status.

**PSC 514 American Public Policy Making 3(3-0)**

This course serves to integrate political institutions and levels of government in terms of policy development and implementation. Prerequisites: PSC 105 or graduate standing.

**PSC 515 Comparative Public Policy 3(3-0)**

Techniques of cross-national and other comparative policy analysis applied to social and economic policies of industrialized nations, especially Western Europe. May be offered as Writing Intensive.

**PSC 516 Environmental Politics and Policy 3(3-0)**

Analysis of relationships between politics and public policy in the environmental arena. Emphasis upon policy making process, political strategies, and alternative decision modes. This course may be offered in an online format. Prerequisite: Completion of 56 credit hours or graduate standing.

**PSC 520 American National Government and Politics 3(3-0)**

This course will examine the major theoretical frameworks used in the study of American national government and politics and survey current research in the area. This course may be offered in an online format. Prerequisite: PSC 105 and a minimum of 12 hours of political science coursework at the 200-level or above, or graduate standing.

**PSC 522 Regulatory Processes and Administrative Law 3(3-0)**

Survey of the principles of administrative law and the politics of the U.S. regulatory processes. This course is approved for offering in a distance learning format.

**PSC 536 Refugees and Forced Migration Studies 3(3-0)**

Major causes of forced migration and their implications for international security. Prerequisites: Completion of 56 credit hours or graduate standing and instructor's permission.

**PSC 551 Seminar in International Relations 3(3-0)**

Significant aspects of international relations on the basis of timeliness and importance.

**PSC 555 International Law I 3(3-0)**

Processes of international law; role in international relations and organizations; effects on individual rights in peacetime through cases, treaties, customs, and legal rules. This course is approved for offering in a distance learning format.

**PSC 556 International Law II 3(3-0)**

This course supplements the study of the international legal regime examined in International Law I by focusing upon the newly established international criminal law regime. Recommended: PSC 555.

**PSC 557 War and Peace Studies 3(3-0)**

This course examines the theory and literature on the causes and consequences of violent conflicts and the uses of non-violent means to conflict resolution.

**PSC 563 Politics and Policy in Urban Communities 3(3-0)**

Examination of large and small city governments. Their political process, behavior and citizen participation. Emerging public policies and intergovernmental cooperation.

**PSC 566 Intergovernmental Relations in the United States 3(3-0)**

An analysis of the administrative and fiscal relationships between the national, state, and local governments, with emphasis on grants-in-aid and revenue sharing.

**PSC 571WI The Military and Politics 3(3-0)**

This course examines the role of the armed forces in politics. Theories about civil-military relations, coups d'états, and transitions to democracy will be analyzed. Writing Intensive. Recommended: PSC 242 or graduate status.

**PSC 583 Survey Research 3(3-0)**

Development and utilization of quantitative data, with emphasis on behavioral research, public opinion polling, and statistical analysis.

**PSC 590 Independent Study 1-6(Spec)**

Explorations of special problems in subject areas found within Political Science individually agreed upon by student and instructor. May be repeated for a maximum of six hours. This course may be offered in an online format. Prerequisite: Undergraduates must have a major or minor in PSC and/or PAD and at least 12 hours completed in PSC and/or PAD, as well as approval by instructor and department chair before registration. Graduate students must have approval by instructor and department chair before registration.

**PSC 598 Special Topics in Political Science 1-12(Spec)**

Subject matter not included in courses currently listed in Bulletin.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**PSC 615 Politics and Regulation of Health Care Policy 3(3-0)****PSC 619 Continuing Registration for Final Research Project 1(1-0)****PSC 640 Seminar in Comparative Politics 3(3-0)****PSC 642 Problems and Processes of International Development I 3(3-0)****PSC 651 Comparative Political & Economic Systems 3(3-0)****PSC 670 Justice, Freedom, Equality: Essential Political Ideas 3(3-0)****PSC 675 Public Sector Emergency and Crisis Organizational Theory 3(3-0)****PSC 676 Emergency and Crisis Prevention, Preparedness and Response 3(3-0)****PSC 677 The Public Sector Role in Post-Disaster Recovery 3(3-0)****PSC 680 Methodology of Political Research 3(3-0)****PSC 682 Techniques of Political Research 3(3-0)****PSC 761 Seminar in American State Government 3(3-0)****PSC 790 Advanced Readings I 1-6(Spec)****PSC 793 Practicum in Citizen Engagement 1-12(Spec)****PSC 798 Thesis 1-6(Spec)**



## PSY - Psychology

See the Department of Psychology for more information.

### PSY 100 Introduction to Psychology 3(3-0)

Survey of concepts, methods, and fields of psychology. This course may be offered in an online or hybrid format. (University Program Group III-A: Behavioral Sciences)

### PSY 200 Special Issues: Title to be listed 1-12(Spec)

Subjects of contemporary psychology not covered by regular curriculum. Prerequisites: See Course Search and Registration.

### PSY 211QR Introduction to Psychological Statistics 3(3-0)

Basic descriptive and inferential statistics are considered, including measures of central tendency and variability, the normal distribution, the t-test, ANOVA, correlation, and chi-square. This course may be offered in an online or hybrid format. Quantitative Reasoning. Prerequisites: PSY 100 and completion of Mathematics Competency.

### PSY 220 Lifespan Developmental Psychology 3(3-0)

Research-based findings on the development of human behavior from conception through late adulthood. This course may be offered in an online format. (University Program Group III-A: Behavioral Sciences)

### PSY 225 Foundations of Cognitive Science 3(3-0)

Introduction to cognitive science, the problems it addresses, its evolving models of the mind, its interdisciplinary nature, and its broader ramifications. Identical to PHL 225. Credit may not be earned in more than one of these courses.

### PSY 250 Abnormal Psychology 3(3-0)

Nature, causes, and treatment of mental disorders. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

### PSY 285 Research Methods 3(3-0)

An introduction to the various research methodologies in Psychology. May be offered as Writing Intensive. This course may be offered in an online format. Prerequisite: PSY 100; one of the following with a grade of C or better: PSY 211, BIO 500, HSC 544.

### PSY 301 Sports Psychology 3(3-0)

The relationship between psychology and sport from the perspective of theory, research, and practice. Topics include personality, cognition, motivation-emotion, social processes, and youth sport. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

### PSY 310 Psychological Testing 3(3-0)

Theory and foundations of testing with some emphasis on the interpretation of test results. Examination of a variety of different tests. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

### PSY 322 Psychology of Infancy and Early Childhood 3(3-0)

Human development from conception through preschool years. Emphasis on research relevant to understanding development and implications of research for preventing and lessening common developmental problems. Prerequisites: PSY 220 or HDF 100 or EDU 280.

### PSY 324 Childhood and Adolescence 3(3-0)

Psychological development from childhood through the college years. Main topics are personality, social, and cognitive development. Prerequisite: PSY 220 or HDF 100 or EDU 280.

### PSY 325 Psychology of Aging 3(3-0)

Empirical approach to understanding changes and continuities in physiological, cognitive, perceptual, behavioral, and social functioning in later life. Prerequisites: PSY 220 or signed Gerontology Minor.

### PSY 330 Social Psychology 3(3-0)

Empirical approach to understanding individual social behavior. Deals with the person and the social environment with a focus in attitudes, interpersonal behavior, and group processes. This course is approved for offering in a distance learning format. Prerequisite: PSY 100.

### PSY 332 Evolutionary Psychology 3(3-0)

Examines human behavior from an evolutionary perspective. Topics include evolutionary theory, sex and mating, child rearing, social relationships, and evolutionary applications to health and work. Prerequisite: PSY 100 or ANT 171. Recommended: BIO 151.

### PSY 334 Psychology of Women 3(3-0)

Explores discrimination, barriers, and opportunities specific to women as related to psychological development, affective and cognitive functioning, personality, role behaviors, sexuality, mental health, and empowerment. Identical to WGS 334. Credit may not be earned in more than one of these courses. This course may be offered in an online format. (University Program Group IV-A: Studies in Discrimination)

### PSY 336 Psychology of Work 3(3-0)

Introduction to psychology applied to work in terms of historical background, staffing decisions, group interactions, organizational culture and change, occupational health, work motivation, and leadership. This course may be offered in an online format. (University Program Group III-B: Studies in Social Structures)

### PSY 337 Psychological of Advertising 3(3-0)

Psychological principles and concepts applied to advertising and selling, promotion, buyer attitudes, consumer behavior, psychological measurement, and prediction in advertising.

### PSY 339 Law and Forensic Psychology 3(3-0)

Introduction to the application of principles and theories of psychological research in the legal system. Prerequisite: PSY 100.

### PSY 340 Studies in Personality 3(3-0)

A survey of the major theories and principles that are used to describe/explain the individual. The primary focus will be on evaluating and testing theories via research findings. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

### PSY 350 Clinical Interviewing and Counseling 3(3-0)

Theory and practice of psychological interviewing and counseling. Recommended: PSY 220, PSY 250. Prerequisites: PSY 100.

### PSY 370 Applied Behavior Analysis 3(3-0)

Applied behavior analysis is the use of principles of learning to address behavior problems of individuals in their natural environments. Prerequisite: PSY 100.

### PSY 379 Health Psychology 3(3-0)

Study of the relationship between psychological variables and health, including physiological factors, psychological influences affecting health, behavior and chronic disease, psychology's contribution to health promotion. This course may be offered in an online or hybrid format. Prerequisite: PSY 100. Recommended: HSC 106.

### PSY 382 Perception 3(3-0)

Perception as the result of psychological and physiological processes. Some of the topics covered are vision, audition, pain perception, illusions, pattern recognition and perceptual development. Prerequisites: PSY 100; a University Program Group II course; competency in written English and mathematics.

### PSY 383 Learning and Memory 3(3-0)

Introduction to the major theoretical-empirical views that characterize the area of learning and memory. Prerequisite: PSY 100.

### PSY 384 Behavior Analysis 3(2-2)

Study of empirically-derived principles of behavior and their application to parenting, education, therapy, self-management and the treatment of the developmentally disadvantaged. Has animal lab component. Prerequisite: PSY 100.

### PSY 385 Applications of Research Methods 3(3-0)

Second course in psychological research methodology. Students design, execute, interpret, and report psychological research. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisites: PSY 285 with a grade of C or better; ENG 201.

### PSY 387 Behavioral Neuroscience 3(3-0)

Overview of the neurological processes underlying organismic behavior. Surveys neurobiological explanations of sensation, movement, motivation, emotion, sleep, learning, neurological disorders, recovery mechanisms. This course may be offered in an online or hybrid format. Prerequisites: One of PSY 100, BIO 112, or HSC 211.

### PSY 400 Special Issues: Title to be listed 1-12(Spec)

Subjects of contemporary psychology not covered by regular curriculum. Prerequisite: See Course Search and Registration.

### PSY 409 History of Psychology 3(3-0)

The historical roots of psychology and their present day manifestations are analyzed. Emphasis is on the more direct antecedents of current thought and practice. Prerequisites: PSY 285, PSY 383.

### PSY 450 Clinical Psychology 3(3-0)

Introduction to the diagnostic, therapeutic, and research activities of the clinical psychologist. Prerequisite: PSY 250.

### PSY 459 Stress 3(3-0)

Defines stress and how to measure it, evaluates evidence about causes/correlates of stress, and introduces strategies to deal with stress. This course is approved for offering in a distance learning format. Prerequisites: PSY 100.

### PSY 487 Recent Advances in Neuroscience Seminar 2(2-0)

Analysis of current research in specified areas of neuroscience; students will learn to read, analyze, critique, and present primary literature. Identical to BIO 487. Credit may not be earned in more than one of these courses. Prerequisites: NSC 302; signed Neuroscience major.

### PSY 490 Field Placement in Psychology 3(Spec)

A structured field placement that provides students with an opportunity to apply psychological principles while working in a professional setting. This course may be offered in an online format. Prerequisites: Permission of instructor and 21 completed credit hours in psychology.

### PSY 496 Directed Research 1-6(Spec)

For students who desire to investigate a research problem in psychology. Prerequisite: Must file a written proposal approved by a faculty sponsor in the departmental office prior to registration.

### PSY 497 Independent Study 1-4(Spec)

For students who accept responsibility for studying a psychological problem on their own. Prerequisite: Must file a written proposal approved by a faculty sponsor in the departmental office prior to registration.

### PSY 498 Undergraduate Honors Thesis 3(Spec)

The student, with guidance from two faculty sponsors, researches and writes an undergraduate thesis. Prerequisites: PSY 211QR or STA 282QR or STA 382QR with a grade of B or better; PSY 285 with a grade of B or better; overall GPA 3.0; permission of instructor.

### PSY 500 Special Issues 1-12(Spec)

Subjects of contemporary psychology not covered by regular curriculum. Prerequisites: See Course Search and Registration.



**PSY 501 Workshop 1-18(Spec)**

Study of problem-oriented subjects for persons already working in psychological services with the intent of continuing their professional growth. Prerequisite: See Course Search and Registration.

**PSY 502 Teaching Assistant in Psychology 1-3(Spec)**

Development of practical skills for effective teaching of psychology. No more than 3 hours of PSY 502 may be applied to a student's psychology major or minor. Prerequisite: permission of instructor.

**PSY 503 Principles and Applications of Sign Language and Manual Systems 3(3-0)**

Focused study in the principles of the application of signed and manual communication with Deaf and other populations for educational, clinical and human service settings.

**PSY 509 Behavioral Pharmacology 3(3-0)**

This course covers basic principles of pharmacology, receptor theory, drug classes, methods in basic pharmacology and behavioral pharmacology, and research and theory in behavioral pharmacology. Prerequisites: PSY 100; PSY 383 or 384 or 387 or graduate status.

**PSY 510 Principles of Psychological Measurement 3(3-0)**

Problems and procedures in scaling and in correlational methods related to testing reliability, validity, and measurement error. This course may be offered in an online format. Prerequisite: PSY 211QR, 310.

**PSY 511 Statistics in Psychology 3(3-1)**

An extension of topics introduced in PSY 211QR, with emphasis upon hypothesis testing and statistical inference. Prerequisite: PSY 211QR or graduate standing.

**PSY 531 Group Dynamics 3(3-0)**

Conceptual and empirical background in the dynamics of face-to-face groups and related interpersonal areas. Emphasis is cognitive-theoretical rather than experiential. Prerequisite: PSY 330 or graduate standing.

**PSY 533 Psychology of Racism 3(3-0)**

This course explores racism from a psychological viewpoint. The processes involved in the development, maintenance and change of racist attitudes are considered. Prerequisites: Junior or higher standing; PSY 330 or SOC 201, a Social Science methods class.

**PSY 534 Psychology and the Courtroom 3(3-0)**

The application of psychological principles and theories to the courtroom. Prerequisites: coursework in basic statistics (e.g., PSY 211) and research methods (e.g., PSY 285); or graduate standing.

**PSY 535 Organizational Psychology 3(3-0)**

The study of organizations as complex social systems with analyses of individual and group behavior in organizations and responses of organizations to their environment. Prerequisite: PSY 336 or graduate standing.

**PSY 536 Personnel Psychology 3(3-0)**

This course examines the identification, measurement, and development of individual differences. Topics include job analysis, criterion development, personnel selection, training, and performance evaluation. Prerequisites: PSY 211, PSY 336; or graduate standing. Recommended: PSY 310.

**PSY 537 Organizational Behavior Management 3(3-0)**

Behavior analysis in business, industry, and human service settings. Applied research in organizations is emphasized. Empirical rather than theoretical approach. Prerequisites: PSY 336 or PSY 370 or PSY 384 or graduate standing.

**PSY 538 Occupational Health Psychology 3(3-0)**

Study of health, well-being, and safety of individuals in the workplace. Prerequisites: PSY 336 or 379, or graduate standing.

**PSY 544 Theories of Personality 3(3-0)**

Theories regarding the structure and functions of personality. Prerequisite: PSY 340.

**PSY 555 Psychopathology of Children 3(3-0)**

Problems of children deviating from the norm in behavior and adjustment. Prerequisites: PSY 220, PSY 250.

**PSY 559 Rehabilitation Psychology 3(3-0)**

Psychological concepts in understanding physical disability from the perspectives of the individual, family and society will be emphasized. Designed for advanced students in health professions. Prerequisites: PSY 100, 220; or graduate standing.

**PSY 562 Therapeutic Intervention: Foundations 3(3-0)**

Foundational skills for therapeutic intervention including theory and technique. Prerequisite: PSY 350 or graduate standing.

**PSY 563 Psychology of Reading 3(3-0)**

Reviews the cognitive processes that operate in skilled reading and focuses on reading development and reading difficulties in K-6th grade. Prerequisite: PSY 220, 285, 383; or graduate status.

**PSY 570 Behavioral Assessment and Treatment Planning 3(3-0)**

This course provides an overview of behavioral assessment procedures. Specific topics include functional behavior assessment, functional analysis, task analysis, data collection, and function-based intervention design. Prerequisite: PSY 370, 384, or graduate status.

**PSY 571 Research Methods in Behavior Analysis 3(3-0)**

Introduction to the fundamentals of behavior analytic research methods. Prerequisite: PSY 370, 384; or graduate standing.

**PSY 575 Autism Spectrum Disorder: Characteristics and Etiology 3(3-0)**

This course reviews characteristics and etiology of individuals with autism spectrum disorders. This course may be offered in an online format. Identical to SPE 530. Credit may not be earned in more than one of these courses. Prerequisites: Junior standing or graduate status.

**PSY 579 Behavioral Medicine 3(3-0)**

Applications of behavior analysis and social learning in medicine, dentistry, and physical health. Prevention, treatment, and long-term maintenance are all considered. Prerequisite: PSY 384 or PSY 370 or graduate standing.

**PSY 583 Motivation and Emotion 3(3-0)**

Survey of the theories, systems and concepts of motivation and emotion. Prerequisites: Fifteen hours of psychology or graduate standing.

**PSY 584 Cognitive Neuroscience 3(3-0)**

Converging evidence from human neuroanatomy and neurophysiology, cognitive psychology, neuropsychology, and neuroimaging research will be examined for topics in attention, perception, memory, language, and emotion. Prerequisites: PSY 387 or graduate standing.

**PSY 585 Psychophysiology 3(3-0)**

Introduction to psychophysiological methods, measures, and applications. Topics include: basic neuroanatomy and neurophysiology; electrophysiological recording; inference using brain, cardiovascular, somatic measures; biofeedback; ergonomic, and other applications. Prerequisite: PSY 387 or graduate standing.

**PSY 586 Applied Behavioral Analysis in Education 3(3-0)**

The use of applied behavior analysis with children and adolescents to promote academic skill development and reduce interfering behaviors. Prerequisites: PSY 370 or graduate standing.

**PSY 587 Physiological Psychology 3(3-0)**

Physiological events which underlie human and animal behavior. Prerequisite: PSY 387 or graduate standing.

**PSY 588 Functional Neuroanatomy 3(3-0)**

Anatomy of the nervous system and its support of behavior. Emphasis is on how various CNS structures function to mediate behavior. Prerequisite: NSC 302 or PSY 387, with a C- or better from either, or graduate standing.

**PSY 589 Cognitive Psychology 3(3-0)**

Introduction to cognitive processes; survey of theory and research in memory, thinking, concept formation, problem solving, and language. Prerequisites: PSY 383.

**PSY 592 Supplemental Supervision in Applied Behavior Analysis 1-12(Spec)**

Supervised field experience for Behavior Analyst Certification Board certification. This course may be offered in an online or hybrid format. Prerequisites: Permission of Instructor.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**PSY 600 Special Issues 1-12(Spec)****PSY 605 Assessment of Affective and Behavioral Disorders of Children and Youth 3(3-0)****PSY 609 History and Systems of Psychology 3(3-0)****PSY 611 Research Design 3(3-0)****PSY 612 Applied Multiple Regression and Correlation 3(3-0)****PSY 613 Multivariate and Correlational Methods 3(3-0)****PSY 614 Seminar in Research Methods and Statistics for Psychology 3-12(3-0)****PSY 619 Continuing Registration for Final Research Project 1(1-0)****PSY 624 Advanced Developmental Psychology 3(3-0)****PSY 630 Advanced Social Psychology 3(3-0)****PSY 636 Advanced Personnel Psychology 3(3-0)****PSY 641 Objective Personality Assessment 3(2-2)****PSY 642 Clinical Research Methods 3(3-0)****PSY 653 Intervention I: Adult 3(3-0)****PSY 655 Introduction to Intelligence Testing 2(2-2)****PSY 656 Advanced Intellectual Assessment 2(2-2)****PSY 657 Assessment I: Adult 3(3-1)****PSY 658 Assessment II: Child and Adolescent 3(3-1)****PSY 660 Intervention II: Child and Adolescent 3(3-0)****PSY 661 Neuropsychological Assessment 3(3-0)****PSY 662 Advanced Therapeutic Interventions 3(3-1)****PSY 667 Assessment and Development of Academic Skills I 3(3-1)****PSY 677 Assessment and Development of Academic Skills II 3(3-0)****PSY 680 Learning 3(3-0)****PSY 681 Sensation and Perception 3(3-0)****PSY 682 Psychology of Child Development 3(3-0)****PSY 686 Engineering Psychology 3(3-0)****PSY 687 Physiological Foundations 3(3-0)****PSY 690 Research Seminar: Experimental Psychology 1-3(Spec)****PSY 696 Directed Research 1-12(Spec)****PSY 697 Independent Study 1-8(Spec)**

PSY 700 Special Issues 1-12(Spec)  
 PSY 724 Psychology of Aging 3(3-0)  
 PSY 727 Developmental Neuropsychology 3(3-0)  
 PSY 736 Interventions in Social Systems 3(3-0)  
 PSY 737 Seminar in I/O Psychology 3-12(Spec)  
 PSY 751 Psychopathology 3(3-0)  
 PSY 760 Seminar A: School Services 3(3-0)  
 PSY 761 Advanced Seminar in Ethical-Legal Issues for School Psychologists 1(1-0)  
 PSY 765 Seminar: Ethics and Professional Issues 3(3-0)  
 PSY 766 Seminar: Consultation Skills 3(Spec)  
 PSY 767 Assessment and Intervention for Developmental Disabilities 3(3-1)  
 PSY 780 Behavior Therapy 3(2-2)  
 PSY 785 Seminar: Cognitive-Behavior Therapy 3(3-0)  
 PSY 789 Seminar in Applied Experimental Psychology 1-9(Spec)  
 PSY 790 Practicum I A: Professional Services 3(Spec)  
 PSY 791 Practicum I B: Professional Services 3(Spec)  
 PSY 792 Supplemental Supervision 1-3(Spec)  
 PSY 795 Internship in School Psychology A 3(Spec)  
 PSY 796 Internship in School Psychology B 3(Spec)  
 PSY 798 Thesis 1-12(Spec)  
 PSY 800 Research in Applied Experimental Psychology 1-12(Spec)  
 PSY 818 Program Evaluation 3(Spec)  
 PSY 850 Ethnic and Minority Issues in Therapy 3(3-0)  
 PSY 890 Practicum II A: Professional Services 3(Spec)  
 PSY 891 Practicum II B: Professional Services 3(Spec)  
 PSY 892 Practicum III A: Professional Services 3(Spec)  
 PSY 893 Practicum III B: Professional Services 3(Spec)  
 PSY 898 Doctoral Dissertation: Design 1-12(Spec)  
 PSY 899 Doctoral Dissertation: Implementation 1-12(Spec)  
 PSY 990 Internship A: Professional Services 1-6(Spec)  
 PSY 991 Internship B: Professional Services 1-6(Spec)

## PTH - Physical Therapy

See the School of Rehabilitation and Medical Sciences for more information.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

PTH 617 Clinical Pathophysiology & Pharmacology I 2(2-0)  
 PTH 618 Human Physical Development 2(2-0)  
 PTH 619 Continuing Registration for Final Research Project 1(1-0)  
 PTH 620 Clinical Management of Geriatric Patients 2(2-0)  
 PTH 621 Clinical Pediatrics 2(2-0)  
 PTH 622 Clinical Pathophysiology & Pharmacology II 2(2-0)  
 PTH 623 Clinical Pathophysiology & Pharmacology III 2(2-0)  
 PTH 624 Clinical Pathophysiology and Pharmacology IV 2(2-0)  
 PTH 625 Imaging in Physical Therapy 1(1-0)  
 PTH 626 Neuroanatomy in Physical Therapy 3(3-0)  
 PTH 633 Clinical Education I 3(1-3)  
 PTH 634 Clinical Education II 6(Spec)  
 PTH 635 Examination and Diagnosis I 2(1-2)  
 PTH 636 Examination and Diagnosis II 2(1-2)  
 PTH 645 Foundations of Patient Care 5(3-4)  
 PTH 646 Therapeutic Interventions 5(3-4)  
 PTH 650 Research & Evidence-Based Practice I 3(3-0)  
 PTH 655 Teaching and Learning in Physical Therapy 2(2-0)  
 PTH 661 Manual Therapy I 1(0-2)  
 PTH 662 Manual Therapy II 2(0-4)  
 PTH 663 Proprioceptive Neuromuscular Facilitation 1(0-2)  
 PTH 665 Physical Therapy Seminar I 1(1-0)  
 PTH 666 Physical Therapy Seminar II 1(1-0)  
 PTH 672 Clinical Anatomy and Kinesiology of Human Joints 4(3-3)  
 PTH 680 International Learning Experience 3(Spec)  
 PTH 690 Motor Learning in Neurorehabilitation 2(2-0)  
 PTH 695 Ethics in Physical Therapy 3(3-0)  
 PTH 700 Aquatic Therapy 1(1-1)  
 PTH 701 Dynamic Therapeutic Taping Techniques 1(1-1)  
 PTH 703 Introduction to Hippotherapy 1(Spec)  
 PTH 704 Oncology Rehabilitation 1(Spec)  
 PTH 706 Current Concepts in Concussion Management 1(Spec)  
 PTH 708 Sports Physical Therapy 1(Spec)  
 PTH 710 Principles in Clinical Administration 2(2-0)  
 PTH 725 Research & Evidence-Based Practice II 1(1-0)  
 PTH 732 Clinical Education III 3(1-3)

PTH 735 Examination and Diagnosis III 2(1-2)  
 PTH 736 Examination and Diagnosis IV 1(1-0)  
 PTH 745 Therapeutic Interventions II 5(3-4)  
 PTH 746 Therapeutic Interventions III 5(4-2)  
 PTH 765 Physical Therapy Seminars III 1(1-0)  
 PTH 766 Physical Therapy Seminars IV 1(1-0)  
 PTH 790 Clinical Research I 4(Spec)  
 PTH 791 Independent Study 1-3(Spec)  
 PTH 792 Special Topics in Physical Therapy 1-9(1-9)  
 PTH 825 Health Promotion in Physical Therapy Practice 2(2-0)  
 PTH 832 Clinical Education IV 12(Spec)  
 PTH 845 Clinical Decision Making in Advanced Therapeutic Exercise 2(1-2)  
 PTH 850 Evidence-Based Practice in Physical Therapy 2(2-0)  
 PTH 870 Rehabilitation Care Management 3(3-0)  
 PTH 890 Clinical Research II 4(Spec)  
 PTH 891 Fall Assessment and Prevention 1(1-0)  
 PTH 894 Issues and Practice in Gender Health 1(1-0)  
 PTH 932 Clinical Education V 12(Spec)

## REL - Religion

See the Department of Philosophy, Anthropology, and Religion for more information.

**REL 101 World Religions: An Introduction to the Study of Religion 3(3-0)**  
 Basic forms of religious thought, practice, and expression studied as a component of human life; includes a survey of major religious traditions. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**REL 102 The Meaning of Life 3(3-0)**  
 Exploring religious and nonreligious ways that humans from diverse societies find value or meaning in human life and propose to live it well. May be offered as Writing Intensive. Identical to PHL 102. Credit may not be earned in more than one of these courses. (University Program Group I-A: Humanities: Human Events and Ideas)

**REL 130 Religion in America 3(3-0)**  
 An introduction to the varieties of religious thought, practice, and expression in America; emphasis on the interactions between religious traditions and American culture and politics. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**REL 140 Religion, Race and Discrimination in America 3(3-0)**  
 Introduction to the religious expressions of Americans who have experienced racial discrimination, with emphasis on Native American, African-American, and Hispanic-American communities. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Diversity in the United States)

**REL 207 Women in Religion 3(3-0)**  
 Explores gender as a category of analysis in the academic study of religion, including opportunities and challenges for women in major religious traditions. Identical to WGS 207. Credit may be earned in more than one of these courses. May be offered as Writing Intensive. Recommended: ENG 201. (University Program Group IV-A: Studies in Discrimination)

**REL 220 Religious Traditions of China 3(3-0)**  
 Study of the basic character of Chinese religious traditions. Examines Chinese Buddhism, Confucianism, Chinese folk religions, and Daoism. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**REL 221 Religious Traditions of Japan 3(3-0)**  
 Study of Japanese religious traditions including Japanese Buddhism, Shinto, Japanese folk religions, and the New Religions of Japan. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**REL 222 Religious Traditions of India 3(3-0)**  
 Major features of religious traditions arising from or dominant within India, including Hindu, Jain, Buddhist, Muslim and Sikh traditions. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**REL 235 Religion and Social Issues 3(3-0)**  
 Introduction to religious and ethical thought in personal, social and institutional contexts. Topics such as violence, sexism/heterosexism, racism, ecology or poverty may be examined. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**REL 240 African-American Religion 3(3-0)**  
 Origins, development, and contemporary character of African-American religion, including Christianity, Islam, and new religious movements. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Diversity in the United States)

**REL 250 Creation, Conquest, and Chaos: Introduction to the Old Testament 3(3-0)**  
 The literature, history, and religion of ancient Israel in its Near Eastern context as disclosed through study of the Hebrew Bible in English translation. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**REL 260 From Gospel to Apocalypse: Introduction to the New Testament 3(3-0)**

*Intensive study of selected portions of New Testament literature, with an introduction to the Hellenistic-Roman age through study of selected background documents. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)*

**REL 302 Witchcraft, Magic, and Occult Phenomena 3(3-0)**

*The history and theory of European witchcraft and demonology. Includes anthropology of witchcraft in non-Christian societies, gender and intersectionality, and new religious movements, like Wicca. Identical to WGS 302. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. Prerequisite: ENG 201 with a grade of C or better. (University Program Group IV-A: Studies in Discrimination)*

**REL 303 Goddesses 3(3-0)**

*Interdisciplinary study of goddesses in selected cultures, ancient and modern. Uses intersectionality to analyze opportunities and challenges inherent in gendering gods, including borrowing/reinventing goddesses today. Identical to WGS 303. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. Prerequisite: ENG 201 with a grade of C or better. (University Program Group IV-A: Studies in Discrimination)*

**REL 304 Religion and Psychology 3(3-0)**

*Surveys classic and contemporary psychological theories of religion, including the behavioral, comparative, and cognitive perspectives; also explores the psychological role of religion in human life.*

**REL 305 Mysticism: Union with the Sacred 3(3-0)**

*Exploration of mystic experience, including consideration of its place in religious life, its modes of expression, and the major mystical figures in the world's religions. May be offered as Writing Intensive.*

**REL 313 Christianity 3(3-0)**

*Development of the Christian religious tradition from Jesus of Nazareth to its major contemporary branches: Orthodoxy, Roman Catholicism, and Protestantism. May be offered as a Writing Intensive. (University Program Group I-A: Human Events and Ideas)*

**REL 314 Islam 3(3-0)**

*Muhammad and the Qur'an, the Sunni and Shi'a split; nine subcultures of the Muslim world; Shari'a; women in Islam; jihad; terrorism; Islamism, and Sufism. May be offered as Writing Intensive. Prerequisite: 15 credit hours. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**REL 315 Judaism 3(3-0)**

*Judaism as a multifaceted approach to identity and lifestyle, both personal and societal; religious expressions such as Torah, myth, ritual, festivals, holy days. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)*

**REL 320 The Buddhist Tradition 3(3-0)**

*The general nature of the Buddhist tradition, with attention to particular developments within it (e.g., tantra, Zen). Primarily examines Buddhism's role in selected Asian cultures. This course may be offered in an online or hybrid format. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**REL 334 Death and Dying 3(3-0)**

*Religious and cultural explanations of death and responses to dying, death and mourning; religious, ethical, biomedical ethical and legal issues, e.g., health care, suicide, abortion, euthanasia. May be offered as Writing Intensive. Pre/co-requisite: 12 credit hours. (University Program Group I-A: Human Events and Ideas)*

**REL 336 Religion and Film 3(3-0)**

*Examines the interrelations of film and religion, including the representation of religion in film and the ways film functions religiously in modern media culture. May be offered as Writing Intensive. Prerequisites: 45 credit hours completed.*

**REL 337 Rock n Roll and Spirituality 3(3-0)**

*Examination of the religious and spiritual components of Rock 'n' Roll historically and thematically. Themes include lyrics, music, concerts, spokespersons, fandom, album art, and costumes. May be offered as Writing Intensive. Pre/co-requisite: 30 credit hours.*

**REL 345 The Civil Rights Movement 3(3-0)**

*Examines the civil rights movement from 1954 to 1980s; based on PBS series: Eyes on the Prize. Identical to PHL 345, PSC 325, SOC 345. Credit may not be earned in more than one of these courses. Prerequisites: Any one of the following: HST 110, HST 111, HST 112, LAR 145, PSC 100, PSC 105, PSC 125, REL 140, SOC 100. (University Program Group IV-C: Studies in Racism and Diversity in the United States)*

**REL 361 Sinners and Saints of Colonial Latin America 3(3-0)**

*Examines the interaction of European, African, and Native American religions and the "heresies" that developed as a result of their interaction during the colonial period. Identical to HST 361. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**REL 362 The Apocalyptic Message and Method 3(3-0)**

*Exploration of apocalyptic thought and literature; examination of its significance and continuing influence; evaluation of its method and approach.*

**REL 365 The Sayings of the Historical Jesus 3(3-0)**

*Study of Jesus' teaching, its environment, sources and methods used for its recovery, literary forms in which it was transmitted, and reconstruction of its contents.*

**REL 376 Women in Muslim Cultures 3(3-0)**

*A survey of women's lives, roles, and issues such as gender segregation, education, and veiling among the peoples of Muslim societies and cultures. Prerequisite: 45 credit hours completed.*

**REL 377 Sufism: Ecstasy and Meditation 3(3-0)**

*A survey of the various phenomena that comprise Sufism: mystical knowledge, spiritual practice, and culture; inner spirituality; master-disciple relationships; Sufi fellowships; and saint veneration. May be offered as Writing Intensive. Prerequisite: 15 credit hours.*

**REL 382 History of Israel 3(3-0)**

*Israel and Palestine from ancient times to the present, including background to contemporary Zionism and the conflict with Arab nationalism. Identical to HST 382. Credit may not be earned in more than one of these courses.*

**REL 397 Special Studies 1-9(Spec)**

*Each offering studies a selected topic using readings, discussions, lectures, and research as appropriate. May be offered as Writing Intensive.*

**REL 494 Independent Study in Religious Studies 1-9(Spec)**

*Directed reading or research of an approved topic guided by a faculty member. Not open to students on academic probation. Prerequisite: permission of instructor.*

**REL 501WI Seminar in the Study of Religion 3(3-0)**

*The study of religion as an academic discipline, including a selection of leading scholarly approaches to the investigation of religious phenomena. Writing Intensive. Prerequisites: 9 credit hours in Religion.*

**REL 505WI Research Seminar 3(3-0)**

*A seminar supporting research projects in religion, primarily intended for seniors who are religion majors. Writing Intensive. Prerequisites: for undergraduates, a signed Religion major with completion of REL 501. For graduate studies, permission of instructor.*

**REL 597 Special Topics 1-6(Spec)**

*Advanced study of selected topics using readings, discussions, lectures, and research as appropriate.*

**RLA - Recreation and Leisure Activities**

*See the Department of Recreation, Parks, and Leisure Services Administration for more information.*

**Note:** a limitation of 6 hours of PED and RLA courses may be applied toward the requirements for graduation.

**RLA 116 Introduction to Fly Fishing 1(1-0)**

*Introduction to basic fly fishing techniques and methods. Not to be applied to an RPL major or minor. CR/NC only.*

**RLA 120 Introduction to Fly Tying 1(1-0)**

*Introduction to beginning fly-tying methods to attract freshwater game fish in lakes and streams. Not to be applied to RPL major or minor. CR/NC only.*

**RLA 150 Canoe Camping and Touring 1(1-0)**

*Fundamentals of canoe camping and touring on lakes and rivers. Not to be applied to RPL major or minor. CR/NC only.*

**RLA 158 Whitewater Rafting 1(1-0)**

*Introduction to the fundamentals of whitewater rafting. Focus on river reading skills, strokes, rescues, and safety. Not to be applied to a RPL major or minor. CR/NC only.*

**RLA 160 Introduction to Recreational Kayaking 1(1-0)**

*Introduction to beginning kayaking skills for kayak touring. Not to be applied to RPL major or minor. CR/NC only.*

**RLA 165 Introduction to Freestyle (Skate) Cross Country Skiing 1(1-0)**

*Introduction to the techniques of freestyle (skate) cross country skiing. Not to be applied to a RPL major or minor. CR/NC only.*

**RLA 168 Introduction to Snowshoeing 1(1-0)**

*Introduction to the concepts, equipment, and skills of snowshoeing. Not to be applied to a RPL major or minor. CR/NC only.*

**RLA 170 Beginning Rock Climbing 1(1-0)**

*Basic concepts of rock climbing and rappelling. Focus will be on belaying, knot tying, gear selection, and movement on the rocks. Not to be applied to an RPL major or minor. CR/NC only.*

**RLA 180 Introduction to Backpacking 2(1-1)**

*Basic concepts of backpacking for the recreational backpacker, focusing on equipment, packing, cooking, hiking, and environmental ethics. Not to be applied to RPL major or minor. CR/NC only.*

**RLA 200 Special Activity Topics in Recreation 1-3(Spec)**

*Designed for students to be introduced to recreation activity topics and skills as lifetime leisure pursuits. Repeatable up to 3 credits when content previously studied is not duplicated. Not to be applied to RPL major or minor. CR/NC only.*

**RLA 270 Advanced Rock Climbing 2(2-0)**

*Learning advanced concepts of rock climbing, focusing on climbing anchors, advanced movement techniques, and safety. Not to be applied to RPL major or minor. CR/NC only. Prerequisite: RLA 170.*



## RPL - Recreation, Parks, Leisure Services Administration

See the Department of Recreation, Parks, and Leisure Services Administration for more information.

### RPL 110 Experience of Disability & Social Marginalization 3(3-0)

Examination of societal attitude and marginalization toward individuals with disability. Insight will be drawn from experiential simulations and personal reflections. This course may be offered in an online format. (University Program Group IV-A: Studies in Discrimination)

### RPL 118 Introduction to Recreation, Parks, and Leisure Services 2(2-0)

The nature, scope, and significance of recreation, parks, and leisure in today's world. A survey of professional opportunities.

### RPL 200 Special Topics in Recreation 1-6(Spec)

Concentrated study of a current recreation topic.

### RPL 205 Outdoor Leadership 3(2-2)

Introduction to outdoor leadership; study of leadership in outdoor and camp settings.

### RPL 206 Recreation Activity Facilitation 3(3-0)

Methods, techniques, facilitation styles, and organization of recreational activities including sports, crafts, cultural arts, games, and teambuilding initiatives.

### RPL 209 Inclusive Recreation with Diverse Populations 2(2-0)

Introduction of inclusive recreation and activity programming with diverse populations. Recommended: RPL 118.

### RPL 210 Introduction to Recreational Therapy 3(3-0)

An introduction to the use of recreational activity as a therapeutic or treatment intervention for individuals with chronic health issues or disability. Recommended: RPL 118.

### RPL 216 Introduction to Outdoor Recreation 3(3-0)

Introduction to history and development of Outdoor Recreation as a profession. Overview of federal, state, and local governments as providers of outdoor recreation.

### RPL 218 Teaching of Outdoor Skills 3(3-0)

Techniques of teaching traditional outdoor recreation pursuits (archery, fishing, canoeing, map and compass). Emphasis on assisting people to develop lifetime outdoor recreation skills.

### RPL 219 Camp Counseling and Leadership 3(3-0)

Introduction to techniques and practices for camp counseling and leadership positions.

### RPL 222 Introduction to Recreation and Event Management 3(3-0)

An introduction to the broad areas of, and career opportunities in, recreation and event management.

### RPL 300 Adventure Therapy 1(Spec)

Examination of the principles of adventure therapy facilitation. Insights will be drawn from both theoretical and experiential learning. Prerequisites: RPL 210 or RPL 216.

### RPL 307 Management Skills in Leisure Services 3(3-0)

The development of conceptual and human relations skills necessary for the successful management of a leisure service agency. Prerequisites: RPL 118; One of the following: RPL 204, 216, 222, 261.

### RPL 310 Pre-Internship in Leisure Services 1(1-0)

Preparation for participation in the internship experience. Should be taken two semesters prior to internship. CR/NC only. Prerequisites: RPL 216 or 222.

### RPL 311 Pre-Internship in Therapeutic Recreation 1(1-0)

Preparation for participation in a therapeutic recreation internship experience. Should be taken two semesters prior to internship. Prerequisites: Two of the following: RPL 340, 341, 342, 345; admission to the Therapeutic Recreation program.

### RPL 312 Disability in Southeast Europe 3(3-0)

This faculty-led study abroad trip examines the cultural and social systems experienced by people with disabilities living in Southeast Europe. This course may be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Cultural Tradition, Option 2)

### RPL 318 Field Course in Recreation Specialization 1-15(Spec)

Supervised practical, field work experience within a leisure services organization.

### RPL 320 Professional Internship in Recreation 1-30(Spec)

In-depth, capstone internship experience in commercial, community, therapeutic, or outdoor recreation. Prerequisite: RPL 310.

### RPL 321 International Practicum in Leisure Services 1-30(Spec)

In-depth, practical field experience for international students with a leisure or recreation agency.

### RPL 333 Production of Festivals and Events 2(1-2)

The production and management of events and festivals through student application and fieldwork. Required attendance at course-identified event for service learning component. Prerequisites: RPL 430; signed Event Management Minor or Recreation, Parks & Leisure Services Administration major.

### RPL 340 Therapeutic Recreation: Developmental Disabilities 3(3-0)

Assessment, planning, and therapeutic recreation programming for individuals with intellectual and developmental disabilities. Prerequisite: RPL 210; Admission to the therapeutic recreation program.

### RPL 341 Therapeutic Recreation: Physical Disabilities 3(3-0)

Assessment, planning, and therapeutic recreation programming for individuals with physical disabilities. Prerequisite: RPL 210; Admission to the therapeutic recreation program.

### RPL 342 Therapeutic Recreation: Behavioral Health 3(3-0)

Assessment, planning, and therapeutic recreation programming for clients with behavioral health impairments. Prerequisite: RPL 210; admission to the therapeutic recreation program.

### RPL 343 Tourism 3(3-0)

An examination of where and why the hospitality services industry client travels domestically and abroad, and the economic impact of tourism expenditures. Identical to HSA 343. Credit may not be earned in more than one of these courses.

### RPL 345 Therapeutic Recreation: Gerontology 3(3-0)

Assessment, planning, and therapeutic recreation programming for individuals with age related disabilities. Prerequisite: RPL 210; Admission to the therapeutic recreation program.

### RPL 348 Aquatic Therapy Seminar 1(1-0)

Explore the benefits and techniques of aquatic therapy when servicing individuals with neurological, neuromuscular, and/or orthopedic disorders. All students will practice techniques in the water. Pre/Co-Requisite: RPL 341, HSC 214. Prerequisite: RPL 210, the ability to swim.

### RPL 349 Facilitation Techniques in Therapeutic Recreation 3(3-0)

An in-depth review of the unique facilitation techniques, interventions, or modalities implemented by the recreational therapist. Prerequisites: RPL 118, 210 and two of the following: RPL 340, 341, 342, 345.

### RPL 351 Pharmacology for Therapeutic Recreation 1(1-0)

Essentials of pharmacology for therapeutic recreation and other allied health professions. Prerequisites: Two of the following: RPL 340, 341, 342, 345.

### RPL 358 Foundations of Outdoor and Environmental Education 3(3-0)

Introduction to the foundational concepts, principles, and teaching methods of outdoor and environmental education for non-formal and formal education settings. May be offered as Writing Intensive.

### RPL 360 Advanced Wilderness Adventure Trip Facilitation 3(Spec)

Development of wilderness adventure facilitation skills including group management, group goal setting, environmental ethics, advanced camping, and wilderness navigation skills. Prerequisite: RLA 180. Recommended: Prior backpacking and camping experience.

### RPL 365 Wilderness First Responder 3(3-0)

In-depth emergency medical training for wilderness settings. Prerequisite: RPL 216.

### RPL 369 Experiential Leadership and Global Learning 3(3-0)

Short-term faculty-led study abroad experience, focused on personal leadership, environmental principles, and cultural awareness in an international context. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition, Option 2)

### RPL 370 Leave No Trace Ethics 1(1-0)

Examines the seven principles of Leave No Trace. Instruction in effective Leave No Trace teaching techniques and certification as professional Leave No Trace Trainers. Prerequisite: RPL signed major/minor.

### RPL 430 Planning Recreation Programs and Events 3(3-0)

Development and implementation of recreation programs and events for diverse populations in a variety of leisure service settings. May be offered as Writing Intensive. Prerequisites: One of the following: RPL 204, 216, 261, 222.

### RPL 435 Leadership in Adventure Education Programming 3(3-0)

Leadership in trip-planning, risk management, and outdoor etiquette in adventure education. In-depth content in facilitation, processing, campcraft skills, and environmental ethics. Weekend trips required. Prerequisites: RPL 205.

### RPL 436 Facility Operations and Maintenance 3(3-0)

Operation and maintenance of areas and facilities for parks, recreation, and leisure services including specialized facilities, e.g. aquatics, ice arenas, sport fields, and natural areas. Prerequisites: RPL 204 or 216 or 261 or 222; signed Recreation Major. Recommended: RPL 307 or 405.

### RPL 438 Meeting and Exposition Planning 3(3-0)

The development of skills and knowledge necessary for successful planning and management of conventions, meetings, and expositions in a recreation and event management setting. Prerequisite: RPL 430.

### RPL 470 Park and Natural Resource Management 3(3-0)

Management of federal, state, and local park systems, and natural resource areas. Focuses on environmental issues, administration, planning, and visitor management. May be offered as Writing Intensive. Prerequisites: RPL 118; one of the following: RPL 204, 216, 261.



**RPL 497 Seminar in Recreation Professional Development 1(1-0)**

Advanced level capstone course focusing on recreation and event management trends and issues, continuing professional development, and resources for continuing education. Prerequisites/Co-requisites: Students must be in their last semester of on campus enrollment prior to the Internship with a minimum of 24 RPL credits and have a signed RPL: Recreation and Event Management major.

**RPL 498 Independent Study 1-6(Spec)**

Student-initiated project or study of a topic related to recreation, parks, or leisure services guided by a faculty member. Prerequisite: Permission of instructor.

**RPL 499 Independent Research in Leisure Services 1-3(Spec)**

Research on a topic of interest to the student. Topic, outcomes, and hours must be approved prior to enrollment. CR/NC only. Prerequisites: Permission of instructor.

**RPL 508QR Budgeting & Funding for Leisure Service Agencies 3(3-0)**

Budgetary and fund development procedures for leisure service agencies. Quantitative Reasoning. Prerequisite: One of the following: RPL 204, 216, 222, 261, graduate status. Pre/Co-requisite: One of the following: RPL 358, 430, 431.

**RPL 511 Liability and Risk Management in Leisure Services 3(3-0)**

Situational analysis of the legal systems impacting the delivery of recreation and leisure services. Emphasis on applied legal understanding and loss control strategies. This course may be offered in an online or hybrid format. Prerequisite: 6 credits in RPL or signed Event Management Minor; or Graduate Status.

**RPL 518 Research & Philosophy in RPL 3(3-0)**

Exploration of the philosophical and social foundations, benefits, and application of recreation and leisure services. Develops skills for research and evaluation in leisure service settings. Prerequisites: 14 credits in RPL or graduate status.

**RPL 521 Fund Development & Grant Writing for Public & Non-profit Organizations 3(3-0)**

Processes and applied skills for fund development and grant writing for public and nonprofit organizations. This course may be offered in an online or hybrid format. Pre/Co-requisites: RPL 405 or 508 or senior or graduate status.

**RPL 545 Marketing of Leisure Services 3(3-0)**

Provides the foundation and basis for applying marketing principles and techniques to the provision of leisure service experiences. May be offered as Writing Intensive. Prerequisites: 6 Credits of RPL or Event Management Minor.

**RPL 552 Environmental Interpretation 3(3-0)**

Advanced concepts and skills for cultural and natural heritage interpretation in parks, natural resource areas, non-profit agencies, zoos, camps, and nature centers. Prerequisites: RPL 358 or graduate status.

**RPL 570 Wilderness Issues and Policy 3(3-0)**

Exploration of wilderness as a unique natural resource context. Examines legislative origins, policy decisions, and management philosophies in relation to current issues and trends. Prerequisites: RPL 216 or graduate status.

**RPL 580WI Programming for Therapeutic Recreation 3(3-0)**

Clinical programming techniques for therapeutic recreation. Writing intensive. Prerequisites: RPL 210 and any two of the following: RPL 340, RPL 341, RPL 342, or RPL 345.

**RPL 581 Therapeutic Recreation: Management Issues 3(3-0)**

Current issues in the administration of therapeutic recreation services including: credentialing, accreditation, coverage, budgeting, quality assurance, risk management, marketing, human resource management, and professional advancement. Prerequisites: RPL 118, 210; two of the following RPL 340, 341, 342, 345. Pre/Co-requisites: RPL 349, 351, 580.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**RPL 600 Advanced Issues in Recreation 1-6(Spec)****RPL 603 Advanced Independent Reading in Recreation 1(Spec)****RPL 605 Administration of Leisure Services Systems 3(3-0)****RPL 610 Leisure Research 1(1-0)****RPL 611 Evaluation in Recreation and Leisure Services 3(3-0)****RPL 615 Practicum in Recreation Supervision and Administration 1-6(Spec)****RPL 616 Evidence-Based Disability & Community Inclusion Practices 3(3-0)****RPL 617 Disability & Social Functioning 3(3-0)****RPL 618 Issues in Leisure 3(3-0)****RPL 619 Continuing Registration for Final Research Project 1(1-0)****RPL 620 Planning for Parks and Recreation Facilities 3(3-0)****RPL 636 Recreation Facility Operations and Management 3(3-0)****RPL 640 Recreation Program and Event Administration 3(3-0)****RPL 652 Outdoor Recreation 3(3-0)****RPL 698 Graduate Internship 1-6(Spec)****RPL 699 Graduate Project 1-6(Spec)****RPL 791 Independent Study 2(Spec)****RPL 798 Thesis 1-6(Spec)****RUS - Russian**

See the Department of History, World Languages, and Cultures for more information.

**RUS 101 Elementary Russian I 4(4-0)**

Designed for students who have had no Russian. Basic language skills. Introduction to the culture of the Russian-speaking countries. Students who have completed more than one year of Russian in secondary schools will not receive credit.

**RUS 102 Elementary Russian II 4(4-0)**

Basic language skills. Continuation of RUS 101. Prerequisite: RUS 101.

**RUS 201 Intermediate Russian I 4(4-0)**

More practice in hearing and speaking Russian, and exercises in reading and writing the language. Prerequisite: RUS 102.

**RUS 202 Intermediate Russian II 4(4-0)**

Continuation of RUS 201. Prerequisite: RUS 201.

**SAM - Science of Advanced Materials**

See the Graduate Bulletin for information on the program.

**SAM 560 Introduction to Rheology 3(3-0)**

Introduction to the flow and deformation of materials under stress. Applications to polymeric and biological materials. Prerequisites: MTH 233, 334; or graduate standing. Recommended: CHM 345 or CHM 331 or PHY 312 or EGR 358.

**SAM 570 Multiscale Modeling and Simulation of Materials 3(3-0)**

Simulation, modeling, and their applications of polymers, colloids, biomaterials, gels, liquid crystals, drug interactions, and nanomaterials on the molecular, mesoscopic, and bulk level. Prerequisites: MTH 233, 334; or graduate standing. Recommended: CHM 345 or 331 or PHY 332 or EGR 355.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**SAM 619 Continuing Registration for Final Research Project 1(1-0)****SAM 620 Chemical Principles in the Science of Materials 3(3-0)****SAM 630 Physical Principles in the Science of Materials 3(3-0)****SAM 685 Current Topics in the Science of Advanced Materials 1-4(1-0)****SAM 690 Special Topics in Science of Advanced Materials 1-9(Spec)****SAM 700 Advanced Materials I: Inorganic and Nanomaterials 3(3-0)****SAM 701 Research Experience in Materials Science 1-9(Spec)****SAM 710 Advanced Materials II: Polymers, Composites and Biomaterials 3(3-0)****SAM 720 Inorganic and Nanomaterials Laboratory 4(2-6)****SAM 721 Polymeric and Biomaterials Laboratory 4(2-6)****SAM 722 Material Surface Characterization Laboratory 3(1-6)****SAM 723 Engineering Materials Laboratory 4(2-6)****SAM 785 Seminar in the Science of Advanced Materials 1(1-0)****SAM 790 Independent Study in Advanced Materials 1-3(Spec)****SAM 795 Internship in the Science of Advanced Materials 1-6(Spec)****SAM 796 Directed Research in the Science of Advanced Materials 1-29(Spec)****SAM 899 Dissertation 1-12(Spec)****SCI - Sciences**

See the College of Science and Engineering for more information.

**SCI 115 Global Challenges, STEM Solutions 3(3-0)**

This is a skill-based course where students explore STEM challenges via case studies and learn to work in diverse teams to reach creative potential solutions. Prerequisites: Admission to the InSciTE program. Recommended: First-year student or transfer student.

**SCI 197 Special Studies in Science 1-12(Spec)**

Primarily for freshmen or sophomores. Prerequisite: permission of instructor.

**SCI 215 Sharing STEM Knowledge 3(3-0)**

This is a skill-based course where students explore different means of communicating within STEM disciplines and further their communication skills while developing their STEM identity. Prerequisite: SCI 115. Recommended: Second-year student or a transfer student.

**SCI 315 STEM Project Management 3(2-2)**

This is a skill-based course where students work collaboratively to acquire project management and data skills to carry out a study addressing current STEM challenges. Prerequisites: SCI 215.

**SCI 320 Fundamentals of Fermentation Science 3(3-0)**

The science of brewing focusing on the biochemistry and microbiology involved in the process of brewing beer. Prerequisites: BIO 101 or BIO 112; CHM 120 or CHM 132.

**SCI 321 Fermentation Analyses 3(1-4)**

Laboratory techniques in brewing analyses. Quantitative and qualitative laboratory analysis of brewing ingredients, processes, and products. Pre/Co-requisite: SCI 320.

**SCI 322 Applied Fermentation Science 3(1-5)**

A practical application of fermentation science principles in the production and analysis of beer. Pre/Co-requisites: SCI 320, SCI 321, SCI 323.

**SCI 323 Brewery Facilities and Operations 3(3-0)**

Study of the design, equipment, operation, and maintenance of a modern brewery. Pre/co-requisite: SCI 320.

**SCI 385 Science and Engineering Practices for Teaching PK-6 2(1-2)**

Integration of science and engineering practices in the teaching and learning of science content in grades PK-6. Prerequisite: SCI 285.

**SCI 397 Special Studies in Science 1-12(Spec)**

Primarily for juniors and seniors. Prerequisite: permission of instructor.

**SCI 400 Teaching Integrated Science in Secondary School 3(2-2)**

Methods of teaching integrated science in the secondary school, including development of lessons in accord with best practices and state content expectations. Course must be completed prior to student teaching.

Prerequisites: AST 111; BIO 208; CHM 132; GEL 201 or GEL 230; GEO 201; PHY 130; EDU 325; Admission to Teacher Education.

**SCI 410 Teaching Integrated Science K-8 3(3-0)**

Development of teaching methods and laboratory skills necessary for teaching science in grades K-8. Prerequisites: BIO 101; CHM 120; PHS 151; GEL 130; GEO 105 or 201; EDU 345; Admission to Teacher Education.

**SCI 415 Interdisciplinary STEM Solutions I 3(1-3)**

First course in the senior capstone experience of the InSciTE certificate, designed to allow students to solve current STEM problems in a realistic research environment. Prerequisite: SCI 315 and 86 hours completed.

**SCI 416 Interdisciplinary STEM Solutions II 3(1-3)**

Second course in the senior capstone experience of the InSciTE certificate, designed to allow students to complete a STEM project in a realistic research environment. Must be taken the semester directly following SCI 415. Prerequisite: SCI 415.

**SCI 420 Internship in Fermentation Science 4(Spec)**

Internship in a production brewery or other brewing-related industry. Prerequisites: SCI 320, 321, 322, 323.

**SCI 490 Contemporary Issues in Earth Science 1(1-0)**

A capstone course for earth science education majors. Students will investigate connections and interrelationships between Earth system components and how these affect civilization and society. This course has been approved for offering in a distance learning format. Prerequisites: 36 credits of required and cognate courses on the earth science education major completed with a minimum average GPA of 2.7.

**SCI 497 Topics in Science Education 1-4(Spec)**

Topics of special interest for integrated science majors that are not normally included in existing courses. Specific topics and instructor's prerequisites will be announced in Course Search and Registration. Prerequisites: See Course Search and Registration.

**SCI 597 Special Studies in Science 1-12(Spec)**

Primarily for graduate students. Prerequisite: permission of instructor.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**SCI 710 Biomolecular Structure and Function-Proteins and Nucleic Acids 4(4-0)****SCI 720 Advances in Cell/Molecular Biology and Genetics 4(4-0)****SCI 730 Seminar 1(1-0)****SCI 731 Biochemistry, Cell and Molecular Biology Colloquium 1-2(Spec)****SCI 740 Research Ethics and Responsible Conduct of Research 1(1-0)****SCI 750 Directed Research in Biochemistry, Cell and Molecular Biology 1-30(Spec)****SCI 760 Biochemistry, Cell and Molecular Biology Student Seminar 1-12(Spec)****SCI 761 Biomedical Grant Writing 1(1-0)****SCI 770 Careers in Biomedical Sciences 1(1-0)****SCI 790 Research in Science Education. 2-4(Spec)****SCI 791 Special Topics in Biochemistry, Cell and Molecular Biology 1-9(Spec)****SCI 798 Thesis 1-6(Spec)****SCI 799 Master's Thesis 1-9(Spec)****SCI 899 Doctoral Dissertation 1-12(Spec)****SCJ - Social and Criminal Justice**

See the School of Politics, Society, Justice, and Public Service for more information.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**SCJ 620 Justice Theory and Practice 3(3-0)****SCJ 630 Government and Corporate Crime 3(3-0)****SCJ 640 Victimology 3(3-0)****SCJ 650 Restorative Justice 3(3-0)****SEP - Sustainability and Environmental Policy**

Contact the Department of Geography and Environmental Studies for more information.

**SEP 300QR Sustainability and Environmental Policy 3(3-0)**

This course uses quantitative reasoning and analyses to explore and evaluate sustainable systems and critical environmental issues of the day from an interdisciplinary perspective. Quantitative Reasoning.

**SLP - Speech-Language Pathology**

See the Department of Communication Sciences & Disorders for more information.

For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.

**SLP 632 Counseling Issues in Communication Disorders 3(3-0)****SLP 637 Special Topics in Communication Disorders 3(Spec)****SLP 638 Adult and Pediatric Swallowing and Feeding Disorders 3(3-0)****SLP 639 Hypopharyngeal Visualization 2(1-2)****SLP 702 Infant-Toddler Communication: Assessment and Intervention 2(2-0)****SLP 704 Language Disorders in Preschool Children 3(3-0)****SLP 708 Language Disorders in School-Age Children 3(3-0)****SLP 713 Voice/Resonance Disorders/Laryngectomy Rehabilitation 3(3-0)****SLP 714 Motor Speech Disorders 3(3-0)****SLP 717 Aphasia and Right Hemisphere Disorders 3(3-0)****SLP 720 Assessment of Literacy Disorders for the SLP 3(3-0)****SLP 722 Cognitive-Communicative Disorders of Dementia and Traumatic Brain Injury 3(3-0)****SLP 735 Augmentative and Alternative Communication 3(3-0)****SLP 736 Speech Sound Disorders in Children 3(3-0)****SLP 739 Stuttering 3(3-0)****SLP 749 Clinical Practicum in Speech-Language Pathology 3-15(Spec)****SLP 795 Internship 3-6(Spec)****SLP 798 Thesis 1-6(Spec)****SOC - Sociology**

See the School of Politics, Society, Justice, and Public Service for more information.

Note: Prerequisites for any undergraduate course in sociology may be waived by permission of the department chair and the instructor.

**SOC 100 Introductory Sociology 3(3-0)**

Systematic introduction to the field of sociology, its theories, concepts, and methods. Explores social relationships within the context of social structure. (University Program Group III-B: Studies in Social Structures)

**SOC 150QR Public Opinion, Social Sciences, and Social Welfare 3(3-0)**

Data to understand public opinion and social welfare. Measurement of concepts. Ways of interpreting data with tables, graphs, and statistics. Computer applications. Identical to SWK 150. Credit may not be earned in more than one of these courses. Quantitative Reasoning.

**SOC 200QR Introduction to Social Research and Analysis 3(3-0)**

Basic research issues. Evaluation of definitions, measurements, and samples from social science data. Univariate, bivariate, and multivariate analysis techniques in social science research. Computer applications. Quantitative Reasoning. Prerequisites: Completion of math competency.

**SOC 201 Social Psychology 3(3-0)**

Examines the links between social structure and self. Substantive topics may include: agency, emotions, socialization, attitudes, gender, inequality, deviance, conflict, and social change. (University Program Group III-A: Behavioral Sciences)

**SOC 204 LGBTQ Identities 3(3-0)**

Explores the social and cultural contributions of LGBTQ individuals and communities as well as discrimination based on gender identity and sexuality. May be offered as Writing Intensive. Identical to WGS 204 and ENG 204. Credit may not be earned in more than one of these courses. Recommended: ENG 101. (University Program Group IV-A: Studies in Discrimination)

**SOC 205 Social Justice in a Global Society 3(3-0)**

Introduction to key concepts in global social justice, foundational human rights instruments and processes, contemporary manifestations of social injustice, and the role of social action. (University Program Group III-B: Studies in Social Structures)

**SOC 210 Sociology of Science and Technology 3(3-0)**

Social aspects of science and technology including their organization, personnel, social effects, relationship to government and education, and policy implications. Prerequisites: SOC 100 or 201 or 221.

**SOC 215 Youth, Deviance, and Institutions 3(3-0)**

Sociological theories and research on youth considered "deviant" and their experiences with social institutions. Emphasis - topics such as runaways, prostitution, foster children, anorexia, addictions, sexuality. Prerequisite: SOC 100 or 201 or 221.

**SOC 220 Introduction to Social and Criminal Justice 3(3-0)**

Components of the justice system. Social, criminal, and community-based focus. History, structure, functions, and philosophy of criminal justice system, and relationships to a just society. Prerequisite: SOC 100.

**SOC 221 Social Problems 3(3-0)**

Explores the nature and extent of major social problems. Examines structural, institutional, constructionist and normative elements, and encourages critical engagement with types of proposed solutions. (University Program Group III-B: Studies in Social Structures)

**SOC 222 Juvenile Delinquency 3(3-0)**

Nature, distribution, social construction, and theories of delinquency. Social reactions to delinquency including development of juvenile court and actions of juvenile justice agencies. Prerequisite: SOC 100 or SOC 201 or SOC 221.

**SOC 250 Pro-Seminar in Sociology 1(1-0)**

Resources, professional development, and careers for sociology majors. Prerequisite: SOC 100. Recommended: SOC 200.

**SOC 301 Sociological Theory 3(3-0)**

A review of sociological thought within its social and historical context, focusing on Marx, Weber, Durkheim, and the perspectives of symbolic interactionism and feminism. Prerequisites: SOC 100 or 201 or 221.

**SOC 302 Social Inequality 3(3-0)**

Study of class, gender, and other forms of social inequality, the impact of inequality and discrimination, and factors linking and perpetuating systems of inequality. Prerequisites: SOC 100 or SOC 201 or SOC 221; or CGL 145. (University Program Group IV-A: Studies in Discrimination)

**SOC 307 Social Movements, 1960s to the Present 3(3-0)**

A survey of social movements of the past several decades that have promoted progressive social change, equal rights, liberation, and peace. Prerequisites: SOC 100 or 201 or 221; or SOC/ANT 101 and a signed Global Justice Minor.

**SOC 311 Sociology of Education 3(3-0)**

Contributions of sociology to an understanding of education as a social process. Prerequisite: SOC 100 or SOC 201 or SOC 221.

**SOC 315 Rape Culture 3(3-0)**

Examination of sexual violence from a sociological perspective. Theoretical and cultural contexts regarding sexual violence, and responses of the criminal justice system globally are covered. Prerequisites: SOC 100, WGS 100, or SWK 100.

**SOC 317 Sociology of Gender 3(3-0)**

Analysis of the role of gender in institutions such as the economy, the family, and the schools. Gender inequality and factors that promote its reproduction. Identical to WGS 317. Credit may not be earned in more than one of these courses. Recommended: Either WGS 100 or prior coursework in Sociology. (University Program Group IV-A: Studies in Discrimination)

**SOC 318 A Toolkit for Advocacy and Activism 3(3-0)**

An introduction to the methods, perspectives, challenges and opportunities of advocacy and activism in contemporary society. Identical to ANT 318 and SWK 318. Credit may not be earned in more than one of these courses. Prerequisites: 30 credit hours or the completion of at least one writing intensive course; the completion of at least one UP Group IV course.

**SOC 321 Deviant Behavior 3(3-0)**

Relationship between social structure and deviant behavior. Prerequisite: SOC 100 or 201 or 221.

**SOC 323 Racism and Inequality 3(3-0)**

Relations among dominant and subordinate groups focusing on racism as structural inequality. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**SOC 324 Criminology 3(3-0)**

Nature, distribution, social construction, and theories of crime. Introduction to criminal justice processes. Prerequisite: SOC 100 or SOC 201 or SOC 221.

**SOC 326 Inequalities and Justice Processes: Race, Class and Gender 3(3-0)**

Empirical and theoretical critique of class, race, and gender inequalities in justice processes that impede effective solutions to social problems. Prerequisite: SOC 100 or SOC 201 or SOC 221.

**SOC 330 Social Issues through the Prism of a Prison 3(3-0)**

Examination of core sociological areas of study including theory, class/gender/sexualities/race, collective action, and deviance. The course is offered inside a correctional institution. Prerequisites: SOC 100; permission of instructor.

**SOC 333 Government and Corporate Crime 3(3-0)**

Definitions, concepts, theories and contemporary examples of organizational corporate and government (state) crime will be explored from a sociological perspective. Prerequisite: SOC 100. Recommended: SOC 220.

**SOC 345 The Civil Rights Movement 3(3-0)**

Examines the civil rights movement from 1954 to 1980s; based on PBS series: *Eyes on the Prize*. Identical to PHL 345, PSC 325, REL 345. Credit may not be earned in more than one of these courses. Prerequisites: Any one of the following: HST 110, HST 111, HST 112, LAR 145, PSC 100, PSC 105, PSC 125, REL 140, SOC 100. (University Program Group IV-C: Studies in Racism and Diversity in the United States)

**SOC 350 Social Research Methodologies 3(3-0)**

Second in methods sequence with SOC 200. Research methodologies. Observation and surveys; two from: experiments/single subject design; program evaluation; interviewing/focus groups; ethnography/community studies. Prerequisites: SOC 100; 200 with a grade of "C" (2.0) or better; or for SOC-PSY double majors only, PSY 211QR with a grade of "C" (2.0) or better may be substituted for SOC 200.

**SOC 365 Criminal Law 3(3-0)**

An introduction to the study of substantive criminal law, including the elements of crimes, defenses to crimes, criminal sanctions, and constitutional limits on criminal law. Identical to PSC 365. Credit may not be earned in more than one of these courses.

**SOC 370 Global Environmental Issues 3(3-0)**

Social and cultural dimensions of global population issues, food and energy policies, destruction of indigenous lifeways, roles of multinational organizations, environmental racism, and environmental movements. Identical to ANT 370. Credit may not be earned in more than one of these courses.

**SOC 371 Culture, Economies, and Social Change 3(3-0)**

Historical and current cultural and economic changes on both a global and local scale. How people both create and live within these changes. Identical to ANT 371. Credit may not be earned in more than one of these courses. Prerequisites: 56 credit hours.

**SOC 397 Independent Study 1-12(Spec)**

Directed reading or research on an approved topic. Not open to students on academic probation. Prerequisites: SOC 100 or 201 or 221; permission of instructor.

**SOC 399 Special Topics in Sociology 1-12(Spec)**

Consideration of subject matter not included in courses currently listed in catalog.

**SOC 403 Political Sociology 3(3-0)**

Social bases of American politics. Sociological theories and research on political behavior and distribution of power in the United States. Prerequisites: SOC 200, 301, 350; or PSC 280 and at least one PSC course at the 300-level or above.

**SOC 409 Victimology 3(3-0)**

Victimology is the scientific study of victims. Different forms of victimization, victim-offender relationships, and the interactions between victims and social systems/institutions are examined. Prerequisites: One of: SOC 100, WGS 100, SOC 201, PSY 100, SWK 100.

**SOC 410 Women, Crime and Deviance 3(3-0)**

Exploring the theories, concepts, and social constructions fundamental to the conceptualization of women as victims, offenders, and workers in the criminal justice system. Identical to WGS 410. Credit may not be earned in more than one of these courses. Prerequisites: SOC 301, SOC 350.

**SOC 411 The Family 3(3-0)**

Family as a contested social institution embedded in changing social and cultural contexts. Explores kinship systems, family diversity, social organization, social conflict, family policy, and change. Prerequisites: SOC 100 or 201 or 221.

**SOC 412 Sociology of Adolescence 3(3-0)**

Transition from childhood to adulthood. Emphasis on topics such as identity, peers, relationships with parents, school, and the media. Prerequisite: SOC 100 or 201 or 221.

**SOC 413 Sociology of Work 3(3-0)**

Work and professions in post-industrial society: historical perspectives, work ideology, work organization, employment relations, and globalization. Prerequisites: 9 hours in Sociology.

**SOC 415 Sociology of Sport 3(3-0)**

Social structure and consequences of sport as an institution in societies. Prerequisite: SOC 100 or 201 or 221.

**SOC 422 Youth Welfare 3(3-0)**

Issues pertaining to youth welfare are related to broader organizational and structural features of society, including historical and comparative (international) perspectives. Identical to SWK 422. Credit may not be earned in more than one of these courses. Prerequisites: SOC/ANT 101 and a signed Global Justice Minor; or SOC 100 and a signed Youth Studies Minor; or SOC 200, SOC 301, and SOC 350.

**SOC 425 Sociology of Childhood 3(3-0)**

Explores peer culture, social problems, children in families, social policy, and social change of children ages 3-12. Also emphasizes race, class, and gender studies. Prerequisites: SOC 100 or 201 or 221.

**SOC 444 Human Trafficking 3(3-0)**

This course examines modern-day human trafficking within the context of social justice and human rights. Prerequisite: SOC 100 or SOC 205 or PSC 351.



**SOC 450 Ethnographic Methods and Research Design 3(3-0)**

Ethnographic methods, ethics, and research design in cultural anthropology. Identical to ANT 450. Credit may not be earned in more than one of these courses. Prerequisite: ANT 170.

**SOC 465 Sociology Capstone 3(3-0)**

A capstone seminar for advanced students within the Sociology major encompassing research and service learning or other sociologically-relevant projects, approved in advance by the instructor. Prerequisites: SOC 200, 301, 350; signed Sociology major; Junior or Senior standing; permission of instructor.

**SOC 507 Class and Poverty in America 3(3-0)**

This course focuses on social classes in America, the intersection of class, race, and gender, theories of social class and poverty, and inequality reduction efforts. Undergraduate Prerequisites: SOC 200, 301, and 350. Graduate Prerequisite: permission of instructor.

**SOC 514 Sociology of Health and Illness 3(3-0)**

Social forces that affect the health of populations and individuals, as well as the operations of a major social institution, that of medical care. Prerequisites: Completion of a University Group III-B Course or regular admission to the Sociology Graduate Program.

**SOC 515 Custodial Institutions 3(3-0)**

The structural organizational, and functional dimensions of custodial institutions in American society, emphasizing social process of jails, prisons, training schools, mental hospitals, and nursing homes. Prerequisites: SOC 300 or SOC 200, 350 or PSC 280; SOC 301; or regular admission to the Sociology Graduate Program.

**SOC 521 Advanced Study of Deviant Behavior 3(3-0)**

Contemporary issues in deviance theory and research. Prerequisites: SOC 300 or both SOC 200 and 350, SOC 301; SOC 321; or regular admission to the Sociology Graduate Program.

**SOC 523 Community Corrections and Alternative Sentencing 3(3-0)**

Justice policies and practices of community corrections and alternative sentencing are featured, including intermediate sanctions, probation, parole, and prisoner reentry. Prerequisites: SOC 300 or both SOC 200 and SOC 350; SOC 301; SOC 220 and an additional 9 hours of social and criminal justice coursework; or regular admission to the Sociology Graduate Program.

**SOC 524 Sociology of Law 3(3-0)**

The association of law and social justice, social organization, stratification, and social control. Current issues in justice, law, and conflict resolution. Prerequisites: SOC 200, 350 (or SOC 300); SOC 301; or graduate standing.

**SOC 525 Internship in Social and Criminal Justice 6(Spec)**

Supervised practical experience in a criminal or social justice organization. CR/NC only. Prerequisites: SOC 523 with a grade of C or better; permission of the course instructor.

**SOC 526 Police and Community Relations 3(3-0)**

Community and police perceptions of police role in democratic society, police discretion, use of force, community policing, and related topics. Prerequisites: SOC 301, SOC 350.

**SOC 527 Community-Based Justice 3(3-0)**

Interdisciplinary approach to community as locus of justice, and justice as locus of community. Review of intellectual heritage of community study; community development; peacebuilding practices. Prerequisites: SOC 200, 301, 350 or regular admission to the Sociology Graduate Program.

**SOC 530 Capstone Experience in Youth Studies 3(3-0)**

Capstone experience for Sociology Major: Youth Studies concentration students to work with youth in community settings and meet on campus to reflect on field experience. Prerequisites: SOC 100, 215, 411, 412, 425; ANT 200 or SOC 311; SOC 422 or SWK 422. Co-requisites: Concurrent enrollment in one of the following is permitted: SOC 311, 411, 412, 422, 425, or SWK 422.

**SOC 599 Special Topics in Sociology 1-10(Spec)**

Consideration of subject-matter not included in courses currently listed in catalog.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**SOC 607 Methodology of Sociological Research 3(3-0)****SOC 631 Workshop on Qualitative Research 3(3-0)****SOC 632 Techniques of Sociological Research 3(3-0)****SPE - Special Education**

*See the Department of Teacher and Special Education for more information.*

**SPE 126 Introduction to Special Education 3(3-0)**

This course is an introduction to the education of students with exceptionalities.

**SPE 210 History of Disability 3(3-0)**

*This course is an introduction to the history of disabilities in America, providing an overview of major historical themes influencing cultural perceptions of disability. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)*

**SPE 250 Reaching and Teaching Diverse Learners 3(Spec)**

This course involves a multi-dimensional exploration of education through the lens of equity and social justice.

**SPE 311 Foundations in Educational Assessment 3(3-0)**

This course is designed to present students with an introduction to educational assessment. Prerequisite: EDU 107.

**SPE 322 Curriculum and Instruction for Students with High Incidence Disabilities 6(6-0)**

Special education instructional design and methodology. Includes evidence-based instruction, classroom management, and technology. Grade of C+ or better required. Prerequisites: SPE 126 with grade of C or better.

**SPE 323 Classroom Management for Students with Special Needs 3(3-0)**

Intervention approaches to design positive classroom environments. Includes identification of behavioral/affective issues, social skills instruction, and proactive classroom management approaches. Grade of C+ or better required. Prerequisites: SPE 126 with a grade of C or better; SPE 322 with a grade of C+ or better. Corequisites: SPE 323 may be taken as a co-requisite with SPE 324.

**SPE 324 Special Education Classroom-Based Assessment 6(2-8)**

This course is designed to present information on the most current trends in classroom-based assessment, with emphasis placed on Curriculum-Based Assessment Methods. NOTE: Application to register for this course must be filed during the semester prior to registration for approval. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and 323 with a grade of C+ or better; Admission to Teacher Education. Pre/Co-requisite: SPE 323 may be taken as a co-requisite with SPE 324.

**SPE 370 Disability and Society 3(3-0)**

*This course examines the consequences of disability from political, social, and economic perspectives and explores issues of ableism and intersectionality. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)*

**SPE 375 Disability Studies Capstone 3(3-0)**

Capstone course synthesizes program content around issues of disability. Course involves active participation in faculty-guided research, service-learning, or other projects. Prerequisites: RPL 110, SPE 210, SPE 370.

**SPE 455 Special Education Student Teaching Seminar 3(3-0)**

This seminar provides review and discussion of a variety of topics related to the special education student teaching experience at the elementary through secondary level. CR/NC only. Prerequisites: Students must have 75 percent of major/minor coursework completed; GPA of 2.7 or better in major/minor coursework; overall GPA of 2.5 or better. Co-requisites: SPE 456 or SPE 458.

**SPE 456 Special Education Clinical Experience: Emotional Impairment 9(Spec)**

This course provides a 16-week clinical experience working with students with emotional impairment in a classroom appropriate to the special education endorsement. CR/NC only. Prerequisites: Elementary Regular Education Students: EDU 107, 330, 380, and 393 with a C+ or better. Minimum of C+ in all EDU courses. Secondary Regular Education Students: EDU 107, 290, 310, 325 with C+ or better. Minimum of C+ in all EDU classes. Both: Approval by major and minor departments indicating that 75 percent of coursework is completed with GPA of 2.7 or better. Overall GPA of 2.7 or better. SPE 126 with a C or better; SPE 322, 323, 324, 578 and 579 all with a C+ or better; Admission to Teacher Education. Co-requisite: SPE 581.

**SPE 458 Special Education Clinical Experience: Cognitive Impairment 9(Spec)**

This course provides a 16-week clinical experience working with students with cognitive impairment in a classroom appropriate to the special education endorsement. CR/NC only. Prerequisites: Elementary Regular Education Students: EDU 107, 330, 380, and 393 with a C+ or better. Minimum of C+ in all EDU courses. Secondary Regular Education Students: EDU 107, 290, 310, 325 with C+ or better. Minimum of C+ in all EDU classes. Both: Approval by major and minor departments indicating that 75 percent of coursework is completed with GPA of 2.7 or better. Overall GPA of 2.7 or better. SPE 126 with a C or better; SPE 322, 323, 324, 578 and 579 all with a C+ or better; Admission to Teacher Education. Co-requisite: SPE 522.

**SPE 466 Independent Study 1-3(Spec)**

Individualized research or project dealing with a problem in special education. This course may be offered in an online format. Prerequisite: permission of department chairperson.

**SPE 500 Collaborating with Stakeholders Around Early Childhood Special Education 3(3-0)**

This course examines current issues in early childhood special education aligned with developmentally appropriate practices, working with families and professionals. Prerequisite: Junior standing.

**SPE 504 Teaching Students in Inclusive Settings 3(3-0)**

Theory and practice of the instruction of students who have disabilities in general education settings. Prerequisite: Junior standing or graduate status.

**SPE 510 Advanced Technology in Education 3(2-3)**

Students will study and practice the integration of technology in classroom instruction and management, with emphasis upon software evaluation and lesson design. This course is approved for offering in a distance learning format. Prerequisite: EDU 290 or graduate status.

**SPE 519 Students with Cognitive Impairment 3(3-0)**

Causes, diagnostic procedures, and research concerning individuals with cognitive impairment from historical, current, and potential future perspectives. Grade of C+ or better required to count toward degree. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and SPE 323 with grades of C+ or better; Admission to Teacher Education. Graduate students may be admitted with permission of instructor.



**SPE 521 Teaching Students with Cognitive Impairment 3(3-0)**

Special techniques and materials used in the instruction of students identified with cognitive impairment. Grade of C+ or better required to count toward degree. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and SPE 323 with grades of C+ or better; Admission to Teacher Education. Graduate students may be admitted with permission of instructor.

**SPE 522 Seminar in Advanced Methods for Teaching Students with Cognitive Impairment 3(3-0)**

This course involves the practical application of pedagogical knowledge for teaching students with cognitive impairment. Students must receive a C+ or better in this course. Prerequisites: SPE 126 with a C or better; SPE 322, 323, 324, 519, 521 all with a C+ or better; Admission to Teacher Education. Co-Requisite: SPE 458.

**SPE 530 Autism Spectrum Disorder: Characteristics and Etiology 3(3-0)**

This course reviews characteristics and etiology of individuals with autism spectrum disorders. Identical to PSY 575. Credit may not be earned in more than one of these courses. Prerequisites: Junior standing or graduate status.

**SPE 531 Autism Spectrum Disorder: Educational Implications 3(3-0)**

Presentation of special techniques and materials used in best practice instruction of students with autism spectrum disorders. Prerequisites: SPE 530; senior standing or graduate status.

**SPE 532 Applied Behavior Analysis for Teachers 3(3-0)**

Applied behavior analysis (ABA) as it relates to learners with autism spectrum disorders in inclusive settings. Prerequisite: SPE 530; senior standing or graduate status.

**SPE 533 Promoting Independence for Students with Autism Spectrum Disorder 3(3-0)**

Presentation of special techniques and materials used in promoting independence through functional living skills and transition for students with autism spectrum disorders. Prerequisite: SPE 530; senior standing or graduate status.

**SPE 536 Field Experience: Autism 3(Spec)**

Practice and application of knowledge and strategies for teaching students with autism under faculty supervision. Application to register for this course must be filed during the semester prior to registration for approval. Prerequisites: SPE 530, SPE 531, PSY 586, PSY 582, CDO 550, and graduate status.

**SPE 545 Special Education Workshop 1-6(Spec)**

Study of trends, alternative approaches, and innovative curricula in programming for the exceptional student. This course is a variable credit topical workshop. Prerequisite: Junior standing or graduate status.

**SPE 550WI Teaching Diverse Students in Educational Settings 3(3-0)**

Survey of sociocultural influences on the performance of students from varying backgrounds, and educational provisions made for them in public schools including an anti-bias framework. Writing Intensive. Prerequisites: Sophomore standing or graduate status.

**SPE 557 Early Childhood Special Education Seminar 3(3-0)**

This course involves the practical application of pedagogical knowledge related to developmentally appropriate educational programming in Birth-Kindergarten settings. Students with B-K or B-3 majors are required to earn a C+ or better in this course. Prerequisites: SPE 585, Admission to Teacher Education, Student Teaching Application Approval; Co-requisite: SPE 558.

**SPE 558 Early Childhood Special Education Clinical Experience 3(Spec)**

This course involves the practical application of pedagogical knowledge related to developmentally appropriate educational programming in Birth-Kindergarten settings. CR/NC only. Prerequisites: SPE 585; Admission to Teacher Education; Student Teaching Application Approval; Co-requisite: SPE 557.

**SPE 570 Career Development and Transitions 3(3-0)**

Lifespan issues for persons with disabilities, stressing curriculum content and instructional strategies that promote interdisciplinary career development and transition education at all age levels. Prerequisites: SPE 126 with a C or better; Junior standing or graduate status.

**SPE 577 Introduction to Specific Learning Disability 3(3-0)**

Systematic introduction to characteristics of specific learning disability (SLD) including eligibility determination and evidence-based instructional approaches for teaching students with SLD. Prerequisite: Junior standing or graduate status.

**SPE 578 Students with Emotional Impairment 3(3-0)**

Diagnostic procedures, therapy, and research concerning children and youth with emotional impairment. Grade of C+ or better required to count toward degree. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and SPE 323 with grades of C+ or better; Admission to Teacher Education.

**SPE 579 Teaching Students with Emotional Impairment 3(3-0)**

Intervention approaches to design positive classroom environments. Includes identification of behavioral/affective issues, social skills instruction, and proactive classroom management approaches. Grade of C+ or better required. Prerequisites: SPE 126 with a grade of C or better; SPE 322, SPE 323 with grades of C+ or better; Admission to Teacher Education. Graduate students may be admitted with permission of instructor.

**SPE 581 Seminar in Advanced Methods for Teaching Students with Emotional Impairment 3(3-0)**

This course involves the practical application of pedagogical knowledge for teaching students with emotional impairment. Students must receive a C+ or better in this course. Prerequisites: SPE 126 with a C or better; SPE 322, 323, 324, 578, 579 all with a C+ or better; Admission to Teacher Education. Co-Requisite: SPE 456.

**SPE 585 Early Childhood Special Education 3(3-0)**

This course examines current issues in early childhood special education aligned with developmentally-appropriate practices, working with families and professionals. Prerequisites: HDF 100; or junior standing; or graduate standing.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**SPE 600 Ethics, Law, and Current Issues in Special Education 3(3-0)****SPE 601 Introduction to Disability Studies 3(3-0)****SPE 602 Exploring Ableism 3(3-0)****SPE 619 Continuing Registration for Final Research Project 1(1-0)****SPE 620 Evidence-based Approaches for Teaching Students with Mild Cognitive Impairment 3(3-0)****SPE 624 Behavioral Assessment and Intervention for Students with Cognitive Impairment 3(3-0)****SPE 640 Administration of Special Education 3(3-0)****SPE 641 Evidence-based Approaches for Teaching Students with Moderate/Profound Cognitive Impairment 3(3-0)****SPE 645 Special Education Workshop 1-6(Spec)****SPE 650 Promoting Self-Determination and Self-Regulation in Students with SLD 3(3-0)****SPE 660 Understanding Students with Disabilities 3(3-0)****SPE 661 Individualized Education Program Development and Implementation 3(3-0)****SPE 662 Culturally Responsive Instruction and Collaboration 3(3-0)****SPE 663 Strategies for Teaching Students with Disabilities 3(3-0)****SPE 665 Independent Study 1-3(Spec)****SPE 671 Transition for Students with Intellectual and Developmental Disabilities 3(3-0)****SPE 675 Literacy Instruction for Students with Specific Learning Disabilities 3(3-0)****SPE 679 Behavioral and Curricular Interventions for Individuals with Mild Disabilities 3(3-0)****SPE 689 Clinical Experience in Special Education 3(Spec)****SPE 690 Mathematics Instruction for Students with Specific Learning Disabilities 3(3-0)****SPE 695 Research for Special Education 3(3-0)****SPE 750 Consultation and Collaboration in Special Education 3(3-0)****SPE 785 Assessment and Data-Based Decision Making in Special Education 3(3-0)****SPE 790 Program and Personnel Evaluation in Special Education 3(3-0)****SPE 798 Thesis 1-6(Spec)****SPN - Spanish**

*See the Department of History, World Languages, and Cultures for more information.*

**SPN 101 Elementary Spanish I 4(4-0)**

*Designed for students who have had no Spanish. Basic language skills. Introduction to the culture of the Spanish-speaking countries. Students who have previous preparation in Spanish are required to take a placement exam. May be offered in an online format. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**SPN 102 Elementary Spanish II 4(4-0)**

*Designed for students who have had Spanish 101 or the equivalent. Basic language skills. Introduction to the culture of the Spanish-speaking countries. Students who have previous preparation in Spanish are required to take a placement exam. May be offered in an online format. Recommended: SPN 101. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**SPN 105 Accelerated Elementary Spanish 4(4-0)**

*Intended for students with high school or other preparation in Spanish who are not ready to begin Intermediate Spanish. Combines SPN 101 and 102. Students with previous preparation in Spanish are required to take a placement exam. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**SPN 110 Study Abroad 1-8(Spec)**

*Intended for beginning students studying abroad. Prerequisite: permission of instructor.*

**SPN 112 Basic Spanish for the Health Professions 3(3-0)**

Course designed for students interested in learning medical vocabulary and basic conversational skills in Spanish dealing with the Health Professions. Taught in Spanish. This course may be offered in an online format. CR/NC only. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**SPN 201 Intermediate Spanish I 4(4-0)**

Further development of all language and reading skills, a review of grammar, and exploration of Hispanic culture. May be offered as Writing Intensive. Recommended: SPN 102. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**SPN 202 Intermediate Spanish II 4(4-0)**

Designed to develop fluency in reading Spanish; cultural emphasis. May be offered as Writing Intensive. Recommended: SPN 201. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**SPN 210 Study Abroad 1-12(Spec)**

Intended for intermediate students of Spanish studying abroad. Prerequisite: SPN 102.

**SPN 214 Intermediate Conversation and Composition 3(3-0)**

Designed to develop fluency and accuracy in written and oral expression. May be offered as Writing Intensive. Recommended: SPN 202; or may be taken concurrently with SPN 202. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**SPN 285 Language and Foreign Accent Discrimination 3(3-0)**

Explores discrimination due to a foreign accent as suffered by Hispanics in the U.S. and by other groups within Latin America. Taught in English. Identical to CGL 285. Credit may not be earned in more than one of these courses. This course may be offered in an online format. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**SPN 310 Study Abroad 1-12(Spec)**

Intended for advanced students studying abroad. Prerequisite: SPN 202; permission of instructor.

**SPN 325 Telenovelas, Streaming Media and Hispanic/Latino Feminist Movements 3(3-0)**

Examination of the significance of Hispanic/Latino feminist movements as documented in history, literature, film, and media such as telenovelas and streaming series. Identical to WGS 325. Credit may not be earned in more than one of these courses. This course may be offered in an online format. (University Program Group I-A: Human Events and Ideas)

**SPN 331WI Advanced Grammar and Composition 3(3-0)**

Designed to develop greater accuracy in grammar and fluency in written expression in Spanish. Writing Intensive. Prerequisites: SPN 202.

**SPN 335 Spanish for Business 3(3-0)**

Designed for students interested in acquiring practical Spanish vocabulary related to business, and in developing writing, reading and speaking skills through business documents in Spanish. Recommended: SPN 202.

**SPN 341 Intercultural Conversations 3(3-0)**

Intended for those with some skill in speaking Spanish who wish to achieve greater fluency. Recommended: SPN 202.

**SPN 345 Spanish Pronunciation 3(3-0)**

Provides an understanding of Spanish articulatory phonetics and helps students improve pronunciation by training them in Spanish articulatory habits to make their pronunciation more native-like. Recommended: SPN 202.

**SPN 350 Spanish for the Professions 3(3-0)**

Course designed to enhance Spanish communication skills and cultural knowledge for use in professional settings including business, public health, and law. This course may be offered in an online format. Recommended: SPN 202.

**SPN 370 Advanced Studies in Spanish 1-12(Spec)**

Special topics may include language, literature and/or culture. May be repeated when the content is not a duplication of a previous special topics offering. Prerequisite: SPN 331WI.

**SPN 375 Introduction to Spanish/English Translation 3(3-0)**

Introduction to the history, theory, and practice of translation in Spanish. Special attention will be paid to the translation principles concerning a variety of texts. Prerequisite: SPN 331.

**SPN 376 Culture and Civilization of Spain 3(3-0)**

Spanish culture and civilization focusing on political, social, intellectual, and artistic developments and their influence on the history and present of Spain. May be offered as Writing Intensive. Prerequisite: SPN 331.

**SPN 377 Culture and Civilization of Latin America 3(3-0)**

Historical and cultural development of Latin America from the pre-Columbian era through the present. May be offered as Writing Intensive. Prerequisite: SPN 331.

**SPN 385 Introduction to Hispanic Linguistics 3(3-0)**

The major aspects related to Hispanic Linguistics such as sound patterns, word-formation, sentence structure, meaning and context, discourse structure, regional and social variation. Prerequisite: SPN 331.

**SPN 386 Survey of Spanish Literature (Beginning to 1700) 3(3-0)**

Literature of Spain from the Middle Ages to 1700. Prerequisite: SPN 331.

**SPN 387 Survey of Spanish Literature (1700 to Present) 3(3-0)**

Literature of Spain from the eighteenth century to the present. Prerequisite: SPN 331.

**SPN 388 Survey of Spanish-American Literature (Beginnings to Modernism) 3(3-0)**

General acquaintance with the literature of Spanish America from its beginnings to the modernist movement. Selections from representative authors. Prerequisite: SPN 331WI.

**SPN 389 Survey of Spanish-American Literature (Modernism to Present) 3(3-0)**

General acquaintance with the literature of Spanish America from modernism to the present. Selections from representative authors. Prerequisite: SPN 331WI.

**SPN 390 Chicano/Latino Experience in the US 3(3-0)**

An examination of the Chicano/Latino experience in the US, including broader issues of inequality, race, ethnicity and discrimination. Taught in Spanish. Recommended: SPN 331WI. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

**SPN 404 Drama of the Siglo de Oro 3(3-0)**

A study of major and lesser playwrights of the 17th century. Recommended: SPN 376 or SPN 377; One of: SPN 386, SPN 387, SPN 388, SPN 389.

**SPN 405WI Modern and Contemporary Spanish Novel 3(3-0)**

Development of the novel in Spain from the nineteenth century to the present. Writing Intensive. Prerequisite: SPN 376 or 377. Recommended: Any other 300-level SPN course.

**SPN 406 The Generation of 1898 3(3-0)**

A study of the literary works of this group as masterpieces of literature and as a reflection of national and spiritual values. Recommended: SPN 376 or SPN 377; One of: SPN 386, SPN 387, SPN 388, SPN 389.

**SPN 410 Study Abroad 1-12(Spec)**

Intended for advanced students studying abroad. Prerequisites: Six hours of Spanish at the 300 level; permission of instructor.

**SPN 411 Practicum in Teaching Spanish 3(2-1)**

Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting materials for secondary-level classrooms. Practical experience through mini-teaching situations. Prerequisites: Two 300-level courses; passing the competency exam; departmental permission.

**SPN 412 Practicum: Secondary Field Experience 1(Spec)**

Pre-student teaching experience in middle or high school teaching situation. CR/NC only. Co-requisite: SPN 411.

**SPN 415WI Spanish-American Novel 3(3-0)**

Representative masterpieces of the novel as they reflect the political and social conditions of the Spanish-American countries. Writing Intensive. Prerequisite: SPN 376 or 377. Recommended: Any other 300-level course.

**SPN 416 Spanish-American Drama and Essay 3(3-0)**

Representative masterpieces of the two genres as they reflect the political and social conditions of the Spanish-American countries. Recommended: SPN 376 or SPN 377; One of: SPN 386, SPN 387, SPN 388, SPN 389.

**SPN 417 Spanish-American Poetry and Short Story 3(3-0)**

Representative masterpieces of the two genres as they reflect the political and social conditions of the Spanish-American countries. Recommended: SPN 376 or SPN 377; One of: SPN 386, SPN 387, SPN 388, SPN 389.

**SPN 421 Foreign Language in Elementary Schools 1(1-0)**

Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting materials for the elementary school classroom. Practical experience through mini-teaching situations. Co-requisites: SPN 411.

**SPN 422 Practicum: Elementary Field Experience 1(Spec)**

Pre-student teaching experience in elementary school teaching situation. CR/NC only. Co-requisite: SPN 421.

**SPN 431WI Advanced Writing in Spanish 3(3-0)**

Writing Spanish in different registers, giving special consideration to the command of grammar, vocabulary, spelling, and style. Emphasis on expository and argumentative texts. Writing Intensive. Prerequisites: SPN 331 with a B- or better; SPN 376 or 377.

**SPN 440 Translating Hispanic Voices 3(3-0)**

Examines the practical and theoretical issues pertaining to literary translation as an artistic, cultural, and ethical process. This course may be offered in an online format. Prerequisite: SPN 331.

**SPN 470 Advanced Studies in Spanish 1-12(Spec)**

Special topics may include language, literature and/or culture. May be repeated when the content is not a duplication of a previous special topics offering. Recommended: SPN 376 or SPN 377; One of: SPN 386, SPN 387, SPN 388, SPN 389.

**SPN 475 Theory and Practice of Translation 3(3-0)**

A study of the historical, theoretical and practical aspects of translation, emphasizing connections between linguistic and cultural factors in the translation process. This course may be offered in an online format. Prerequisites: SPN 375.

**SPN 495 Professional Internship in Spanish 1-6(Spec)**

Supervised internship with an approved organization in the U.S. or a Spanish-speaking country to reinforce and build upon skills learned in Spanish courses. Prerequisites: Six hours of Spanish at the 300 level; permission of instructor.

**SPN 508 Contemporary Spanish Novel and Short Story 3(3-0)**

Outstanding novels and short stories of Spain since 1940 reflecting politics, society, economics, and culture of Spain after the Civil War. Recommended: Three (3) credits in Spanish at the 400 level.

**SPN 591 Special Topics in Spanish 1-9(Spec)**

Special topics may include language, literature and/or culture. May be repeated when the content is not a duplication of a previous special topics offering. Recommended: Three (3) credits in Spanish at the 400-level.

**SPN 597 Independent Study 1-6(Spec)**

The in-depth study of a topic under the direction of a faculty member who together with a student designs the format of the study. Prerequisites: permission of instructor and department chairperson; three (3) credits in Spanish at the 400 level.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**SPN 610 Studies in U.S. Latino Cultures 3-6(3-0)****SPN 615 Themes in Latin American Cultural Studies 3-9(Spec)****SPN 619 Continuing Registration for Final Research Project 1(1-0)****SPN 620 Special Topics in Spanish-American Literature 3-9(Spec)****SPN 621 Colonial to 19th-Century Spanish American Literature 3(3-0)****SPN 622 20th and 21st-Century Spanish American Literature 3(3-0)****SPN 623 Critical Thinking through Hispanic Literature 3(3-0)****SPN 630 Themes in Spanish Peninsular Literature and Cultures 3-9(Spec)****SPN 631 Medieval and Golden Age Spanish Literature 3(3-0)****SPN 632 Eighteenth to Twenty-first Century Spanish Literature 3(3-0)****SPN 640 History of the Spanish Language 3(3-0)****SPN 650 Stylistics 3(3-0)****SPN 655 Spanish Pragmatics and Critical Discourse Analysis 3(3-0)****SPN 660 Spanish Phonology 3(3-0)****SPN 665 Second Language Acquisition: Theory and Practice 3(3-0)****SPN 670 Study Abroad: Latin America 3-6(Spec)****SPN 680 Study Abroad: Spain 3-6(Spec)****SPN 697 Individual Study for the Comprehensive Examination 3(3-0)**

## SSC - Social Sciences

*See the College of Liberal Arts and Social Sciences for more information.*

**SSC 197 Special Studies in Social Science 1-12(Spec)**

Primarily for freshmen or sophomores. Prerequisite: permission of instructor.

**SSC 397 Special Studies in Social Science 1-12(Spec)**

Primarily for juniors and seniors. Prerequisite: permission of instructor.

**SSC 597 Special Studies in Social Science 1-12(Spec)**

Primarily for graduate students. Prerequisite: permission of instructor.

## STA - Statistics

*See the Department of Statistics, Actuarial and Data Sciences for more information.*

**STA 103QR Evidence-based Problem Solving in Modern Society 3(3-0)**

Evidence-based problem solving strategies useful for everyday life. Focuses on the use of data and evaluation of risks and uncertainty in modern society. Quantitative Reasoning.

**STA 212QR Games, Science, and Probability 3(2-2)**

Introduction to elementary probabilistic concepts by exploring ancient and modern games as they relate to decision making. Simple computations will aid the experimental component. Identical to MTH 212QR and PHY 212QR. Credit may not be earned in more than one of these courses. Quantitative Reasoning. Prerequisites: MTH 105 or 107 or 109 or 113 or 130 or 132 or 133. (University Program Group II-B: Quantitative and Mathematical Sciences)

**STA 282QR Introduction to Statistics 3(3-0)**

Descriptive statistics, probability, sampling distributions, statistical inference, regression. Course does not count on major, minor in mathematics. Credit may not be earned in more than one of these courses: STA 282, STA 382, STA 392. Satisfies Mathematics Competency. Quantitative Reasoning. Recommended: MTH 105 or competency.

**STA 382QR Elementary Statistical Analysis 3(3-0)**

An introduction to statistical analysis. Topics will include descriptive statistics, probability, sampling distributions, statistical inference, and regression. Credit may not be earned in more than one of these courses: STA 282, STA 382, STA 392. Satisfies Mathematics Competency. Quantitative Reasoning. Recommended: MTH 130 or 132 or 133. (University Program Group II-B: Quantitative and Mathematical Sciences)

**STA 392 Probability and Statistics for Engineers 3(3-0)**

An introduction to statistical analysis emphasizing engineering applications. Topics include descriptive statistics, probability, sampling distributions, estimation, hypothesis testing, regression, quality control, and reliability. Satisfies Mathematics Competency. Credit may not be earned in more than one of these courses: STA 282, 382, and 392. Prerequisite: MTH 133.

**STA 575 Statistical Programming for Data Management and Analysis 3(3-0)**

Introduction to statistical programming for managing and analyzing data, including programming logic, data manipulation, missing data handling, basic techniques for analyzing data and creating reports. Prerequisites: STA 282 or 382 or 392; or graduate standing.

**STA 580 Applied Statistical Methods I 3(3-0)**

Applications of statistical analysis methods including the usage of computer software packages. Topics include simple and multiple regression, diagnostics, forecasting, and analysis of variance. Prerequisites: STA 282 or 382 or 392; or graduate standing.

**STA 581 Probability and Statistics for Data Science 3(3-0)**

Probability concepts, conditional probability, independence, expectations, discrete and continuous distributions, sampling distributions, estimation, hypothesis testing, goodness of fit tests. Credit may not be earned in more than one of these courses: STA 581, STA 584. Prerequisite: MTH 133 or graduate standing.

**STA 582 Experimental Designs 3(3-0)**

Randomized block designs, Latin square designs, factorial designs, fractional factorial designs, response surface methods, robust designs. Prerequisite: STA 580.

**STA 583 Nonparametric Statistics 3(3-0)**

Theory and applications of nonparametric methods. Topics include one, two, and several sample problems, rank correlation and regression, Kolmogorov-Smirnov tests and contingency tables. Prerequisites: STA 282 or 382 or 392; or graduate standing.

**STA 584 Mathematical Statistics I 3(3-0)**

Probability defined on finite and infinite sample spaces, conditional probability and independence, random variables, expectations, moment-generating functions, probability models, limit theorems. Prerequisite: MTH 233.

**STA 585 Mathematical Statistics II 3(3-0)**

Introductory topics from mathematical theory of statistics: population distributions, sampling distributions, point and interval estimation, tests of hypotheses. Prerequisite: STA 584.

**STA 586 Clinical Trials and Survival Analysis 3(3-0)**

Simple and advanced statistical techniques used in the analysis and interpretation of clinical research data. Emphasis on statistical techniques commonly used in chronic disease analysis. Prerequisite: STA 282 or 382 or 392; or graduate standing.

**STA 587 Statistical Theory and Methods for Quality Improvement 3(3-0)**

Statistical theory and methods for optimizing quality and minimizing costs: classical and recently developed on-line methods and Taguchi's off-line quality and robust designs. Prerequisites: STA 580.

**STA 588 Sampling Techniques 3(3-0)**

Principles of sampling; simple random sampling; stratified random sampling; systematic sampling; cluster sampling; sample size determination; ratio and regression estimates; comparisons among the designs. Prerequisites: STA 282 or 382 or 392; or graduate standing.

**STA 589 Time Series Forecasting 3(3-0)**

Introduction to basic time series forecasting techniques. Topics include forecasting, basic stochastic models, time series regression, stationary and nonstationary models. Prerequisite: STA 580.

**STA 590 Applied Statistical Methods II 3(3-0)**

Linear models with autocorrelated errors, non-linear regression, logistic regression, multiway ANOVA, simultaneous comparison procedures, ANOVA diagnostics, analysis of covariance, unbalanced data and missing data analysis. Prerequisites: MTH 223; STA 580; or graduate standing.

**STA 591 Data Mining Techniques I 3(3-0)**

Data mining techniques for analyzing large and high dimensional data. Topics include data mining strategy, exploratory analysis, predictive modeling techniques, model assessment and comparison. Prerequisite: STA 580 or graduate standing.

**STA 592 Six Sigma: Foundations and Techniques for Green Belts 3(3-0)**

Six Sigma problem solving strategy for continuous improvement. Topics include DMAIC and PDSA strategies and applications, tools and statistical techniques used in the strategies. Prerequisites: STA 282 or 382 or 392; or graduate standing.

**STA 595 Introduction to Bayesian Statistics 3(3-0)**

Introduction to Bayesian analysis and applications. Topics include principles of Bayesian statistics, Bayesian linear models and generalized linear models. Prerequisites: STA 580; STA 581 or 584; or graduate standing.

**STA 596 Special Topics in Statistics 1-6(Spec)**

Subject matter not included in regular courses. May be taken for credit more than once, total credit not to exceed 6 hours. Prerequisite: permission of the instructor.

**STA 597 Independent Study 1-6(Spec)**

The in-depth study of a topic in statistics under the direction of a faculty member. May be taken for credit more than once, total credit not to exceed six hours. Prerequisite: Permission of instructor.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**STA 619 Continuing Registration for Final Research Project 1(1-0)****STA 675 Advanced Statistical Data Management and Simulation 3(3-0)**



**STA 678 Categorical Data and Survival Analysis 3(3-0)**  
**STA 682 Linear Models 3(3-0)**  
**STA 684 Theory of Statistical Inference 3(3-0)**  
**STA 686 Multivariate Analysis 3(3-0)**  
**STA 691 Advanced Data Mining Techniques 3(3-0)**  
**STA 694 Theory and Applications of Bayesian Statistics 3(3-0)**  
**STA 695 Practicum/Internship 3(Spec)**  
**STA 696 Special Topics in Statistics and Analytics 1-6(Spec)**  
**STA 697 Independent Study 1-9(Spec)**  
**STA 698 Plan B Project 3(Spec)**  
**STA 782 Generalized Linear Models 3(3-0)**  
**STA 784 Theory of Estimation 3(3-0)**  
**STA 785 Distribution Theory and Applications 3(3-0)**  
**STA 794 Internship: College Teaching 3(Spec)**  
**STA 795 Advanced Practicum/Internship 3(Spec)**  
**STA 796 Special Topics in Advanced Statistics and Analytics 1-6(Spec)**  
**STA 797 Independent Study 1-15(Spec)**  
**STA 898 Dissertation 1-30(Spec)**

## SWK - Social Work

*See the School of Politics, Society, Justice, and Public Service for more information.*

### **SWK 100 Introduction to Social Work 3(3-0)**

Principles and values of social work, community resources and social service agencies, helping methods, and the role of the professional social worker.

### **SWK 150QR Public Opinion, Social Sciences, and Social Welfare 3(3-0)**

Data to understand public opinion and social welfare. Measurement of concepts. Ways of interpreting data with tables, graphs, and statistics. Computer applications. Identical to SOC 150. Credit may not be earned in more than one of these courses. Quantitative Reasoning.

### **SWK 205 Pre-professional Seminar 1(1-0)**

An introduction to professional skills. May be taken concurrently with an applied pre-professional experience in human services. Prerequisite: 24 semester hours completed.

### **SWK 206 Pre-professional Applied Experience 1-5(Spec)**

An introduction to professional skills through an applied experience in a community-based or human service-related setting. Each credit will require a minimum 50 contact hours in a professional experience. CR/NC only. Pre/Co-requisite: SWK 205.

### **SWK 250 Social Welfare Policies and Services I 3(3-0)**

History of social welfare and social action. Analysis of American social welfare systems. Links between social policy and needs and impacts on vulnerable groups.

### **SWK 270 Introduction to Community Development 3(3-0)**

Theoretical and practical overview of community development as a core social work competency, focusing on critical issues confronting communities in the 21st century. May be offered in an online or hybrid format.

### **SWK 302 Social Work Practice in Gerontology 3(3-0)**

Theories, interventions, and issues in social work practice in gerontology. Prerequisites: SWK 100; SOC 100; PSY 100 or HDF 247.

### **SWK 305 Overview of Child Welfare 3(3-0)**

An overview of current issues and knowledge in child welfare practice and policy. Theory relevant to understanding child abuse and neglect is introduced. Prerequisite: 45 credit hours completed.

### **SWK 315 Social Work Generalist Practice I 3(3-0)**

Generalist communication skills through interviewing and information exchange with micro, mezzo and macro client systems. Develop ability to assess information obtained. Prerequisites: Must have minimum of 2.5 GPA; signed Social Work Major; applied to the Social Work Program; SWK 100; completion of 50 credit hours. Pre/Co-requisites: SWK 250; SWK 350. Co-requisite: SWK 374.

### **SWK 318 A Toolkit for Advocacy and Activism 3(3-0)**

An introduction to the methods, perspectives, challenges and opportunities of advocacy and activism in contemporary society. Identical to ANT 318 and SOC 318. Credit may not be earned in more than one of these courses. Prerequisites: 30 credit hours or the completion of at least one writing intensive course; the completion of at least one UP Group IV course.

### **SWK 321 Social Work Generalist Practice II 3(3-0)**

Knowledge, skills, and values for social work generalist practice within micro, mezzo, and macro client systems. Emphasis on culturally-competent and evidence-based practice. Prerequisites: Admitted to the Social Work Program; all SWK program required volunteer hours completed; SWK 315, SWK 374. Co-requisite: SWK 375.

### **SWK 331WI Social Work Generalist Practice III 3(3-0)**

Generalist social work practice with micro, mezzo and macro systems continued from SWK 315 and SWK 321 with emphasis on the strengths perspective. Writing Intensive. Prerequisites: Admitted to the Social Work Program; all SWK program required volunteer hours completed; SWK 315, SWK 321. Co-requisite: SWK 470.

### **SWK 350 Social Work Research Methodologies 3(3-0)**

Data collection methodologies and issues for evidence-based practice and applied social work research including: experiments/single subject design, program evaluation, interviewing, community studies. Prerequisite: SWK 100; SOC 200QR or PSY 211QR or STA 282QR, with a C or better. Pre/Co-requisites: SWK 250 or SOC 221 or SOC 302.

### **SWK 374 Social Work and Human Behavior I 3(3-0)**

Critique and analysis of theory explaining human behavior in individuals and families. Use of theory in social work practice with diverse and/or oppressed populations. Prerequisites: Must have minimum of 2.5 GPA; signed Social Work Major; applied to the Social Work Program. Pre/Co-requisites: SWK 250; BIO 151 or HSC 211.

### **SWK 375 Social Work and Human Behavior II 3(3-0)**

Theories explaining human behavior in groups, organizations, communities, and global systems. This course may be offered in an online or hybrid format. Prerequisites: Admitted to the Social Work Program; C or better in SWK 374. Co-requisite: SWK 321 OR completion of 86 hours in Bachelor of Science with an Option in Community Development.

### **SWK 397 Independent Study 1-12(Spec)**

Directed reading or research on approved topic. Prerequisite: permission of instructor.

### **SWK 399 Special Topics in Social Work 1-12(Spec)**

Consideration of subject matter not included in courses currently listed in the Bulletin.

### **SWK 422 Youth Welfare 3(3-0)**

Issues pertaining to youth welfare are related to broader organizational and structural features of society, including historical and comparative (international) perspectives. Identical to SOC 422. Credit may not be earned in more than one of these courses. Prerequisites: SOC/ANT 101 and a signed Global Justice Minor; or SOC 100 and a signed Youth Studies Minor; or SOC 200, SOC 301, and SOC 350.

### **SWK 450 Social Welfare Policies and Services II 3(3-0)**

Analysis and evaluation of social policies welfare services. Emphasis on social action, social and economic justice and impact on at-risk groups. May be offered as Writing Intensive. Prerequisites: Admitted to the Social Work Program; SWK 250; SOC 221 or SOC 302; SWK 470. Co-requisites: SWK 480.

### **SWK 470 Social Work Practicum I 4(Spec)**

200 hours of supervised experience in a social work setting. CR/NC only. Prerequisites: Admitted to the Social Work Program; SWK 321, 375. Co-requisite: SWK 331, 471.

### **SWK 471 Social Work Practicum Seminar I 2(2-0)**

Students consciously and critically integrate knowledge with direct practice observed in a field agency and compare generalist practice as implemented in different agencies. Prerequisites: Admitted to the social work program; Co-requisite: SWK 470.

### **SWK 480 Social Work Practicum II 4(Spec)**

Continuation of 200 hours of supervised experience in a social work setting. CR/NC only. Prerequisites: Admitted to the Social Work Program; SWK 470, 471 with a B- or better. Pre/Co-requisite: SWK 450. Co-requisite: SWK 481.

### **SWK 481 Social Work Practicum Seminar II 2(2-0)**

Students consciously and critically integrate knowledge with direct practice as performed in a field agency and compare generalist practice as implemented in different agencies. Prerequisites: SWK 471 with a B- or better, SWK 470. Pre/Co-requisite: SWK 450. Co-requisite: SWK 480.

### **SWK 490 Community Development: A Critical Approach 3(3-0)**

Integrative capstone experience that synthesizes knowledge, skills, and applications in community development and community-based social work in an applied agency project proposal. May be offered in an online or hybrid format. Pre/Co-requisite: SWK 470 (for Social Work students) or Prerequisite: 86 semester hours and signed major in Bachelor of Science degree with an option in Community Development.

### **SWK 597 Independent Study 1-12(Spec)**

Directed reading or research on approved topic. Prerequisite: Completion of SWK 321 or graduate standing.

### **SWK 599 Special Topics in Social Work 1-12(Spec)**

Consideration of subject matter not included in courses currently listed in the Bulletin. Prerequisite: Completion of SWK 321 or graduate standing.

## TAI - Theatre and Interpretation

*See the Department of Theatre and Dance for more information.*

### **TAI 170 Oral Interpretation of Literature 3(3-0)**

General education approach to the art of oral interpretation as a dynamic means of analyzing and experiencing literature while communicating it with others. Satisfies Oral English Competency. (University Program Group I-B: The Arts)

### **TAI 175WI The Art of Theatre: From "Hamlet" to "Hamilton" 3(3-0)**

A survey course that explores the development of theatre by looking at the art, craft, and business of the theatre. Writing Intensive. (University Program Group I-B: The Arts)

### **TAI 177 Stagecraft and Stage Lighting 3(0-6)**

Basic principles of scenery construction. Theory and principles of basic stage lighting and sound.



## TAI 178 Special Topics in Theatre 3-9(Spec)

Current topics for each semester listed in Course Search and Registration. May be repeated for a maximum of 9 credit hours.

## TAI 180 First-Year Theatre Seminar 2(2-0)

An introductory course that situates theatre as a topic of exploration and investigation. This course also focuses on student success in the CMU theatre major.

## TAI 182 Acting I 3(3-0)

Introduction to the basic principles of acting (includes brief overview of directing).

## TAI 270 Live Event Sound 3(1-4)

Provides students with the basic skills to design sound systems and mix sound for live performances and events including Theatrical, Music (Concert) and Speech. Identical to BCA 270. Credit may not be earned in more than one of these courses.

## TAI 277 Stage Management 3(3-0)

Principles and practices of stage management. Duties and responsibilities of the stage manager with emphasis on stage management in academic, community, and professional theatre. Prerequisites: TAI 177; 182.

## TAI 278 Stage Makeup 3(2-2)

Theory and practice in straight and character makeup.

## TAI 280 Script Analysis 3(3-0)

Introduction to analysis of scripts/dramatic texts for theatrical production, concentrating on the script as the primary source for performance. Prerequisite: TAI 175 or TAI 180.

## TAI 282 Acting II 3(3-0)

Introduction to emotional technique and characterization through exercises and scenes in individual projects. Prerequisite: TAI 182.

## TAI 300 Improvisation 3(2-2)

Creation of spontaneous performances, emphasizing scenes, monologues, and storytelling. Prerequisite: TAI 182.

## TAI 302 Voice and Diction 3(3-0)

Theory and practice of principles necessary for improving the speaking voice. Primary emphasis on individual speech improvement. Satisfies Oral English Competency.

## TAI 305 Studio: Acting/Performance 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of acting/performance. Prerequisite: written permission of instructor.

## TAI 306 Studio: Directing 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of directing. Prerequisite: written permission of instructor.

## TAI 307 Studio: Movement 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of movement. Prerequisite: written permission of instructor.

## TAI 308 Studio: Script Creation 1-4(Spec)

Script creation through adaptation of nondramatic materials or creation of original dramatic material for potential use in laboratory theatre or oral interpretation activities. Prerequisite: written permission of instructor.

## TAI 309 Studio: Stage Management 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of stage management. Prerequisite: written permission of instructor.

## TAI 310 Studio: Sound 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of sound. Prerequisite: written permission of instructor.

## TAI 311 Studio: Properties 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of properties. Prerequisite: written permission of instructor.

## TAI 312 Studio: Scenery Construction and Rigging 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of scenery construction and rigging. Prerequisite: written permission of instructor.

## TAI 313 Studio: Scenery Design 1-4(Spec)

Major participation in faculty/staff-supervised University Theatre activities in the area of scenery design. Prerequisite: written permission of instructor.

## TAI 314 Studio: Lighting 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of lighting. Prerequisite: written permission of instructor.

## TAI 315 Studio: Lighting Design 1-4(Spec)

Major participation in faculty/staff-supervised University Theatre activities in the area of lighting design. Prerequisite: written permission of instructor.

## TAI 316 Studio: Technical Direction 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of technical direction. Prerequisite: written permission of instructor.

## TAI 317 Studio: Costuming 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of costuming. Prerequisite: written permission of instructor.

## TAI 318 Studio: Wardrobe Management 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of wardrobe management. Prerequisite: written permission of instructor.

## TAI 319 Studio: Makeup 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of stage makeup. Prerequisite: written permission of instructor.

## TAI 320 Studio: Theatre Management 1-4(Spec)

Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of box-office management. Prerequisite: written permission of instructor.

## TAI 321 Studio: Dramaturgy 1-4(Spec)

Major participation in faculty and/or staff-supervised university theatre or oral interpretation activities in the area of dramaturgy. Prerequisite: Written permission of instructor.

## TAI 322 Studio: Costume Design 1-4(Spec)

Major participation in faculty/staff-supervised University Theatre or Dance activities in the area of Costume Design. Prerequisite: Written permission of the instructor.

## TAI 350QR Costume Fundamentals 3(3-0)

Exploration of costuming as an essential part of theatre, entertainment and visual art industries. Quantitative reasoning analysis and application in theatrical costume design and creation. Quantitative Reasoning.

## TAI 352 Music Theatre Scene Study 3(1-2)

Analysis and presentation of musical theatre scenes (duets, trios, groups). Study of character development in various music theatre styles. Prerequisites: MUS 150; TAI 182.

## TAI 371 Readers Theatre 3(3-0)

Scripting and directing alternative texts for performance, including narrative fiction, lyric poetry, personal narratives, and nonfictional prose. Prerequisite: TAI 170.

## TAI 373 Oral Interpretation for Children 3(3-0)

General education approach to the art of oral interpretation as a dynamic means of experiencing literature for children and communicating it to children.

## TAI 376 Interpretation of Drama 3(3-0)

Specialized study of dramatic literature with particular attention to analysis, performance, styles of drama, stage speech, and appropriate dialects. Prerequisite: TAI 170.

## TAI 377 Costuming I 3(3-0)

Survey of costume history, Egyptian to the present; introduction to design and construction techniques.

## TAI 378 Stage Combat 3(2-2)

Basic principles of stage combat as they apply to hand-to-hand, quarter-staff, and rapier-and-dagger techniques. Prerequisite: TAI 182.

## TAI 379 Acting for the Camera 3(3-0)

The creative process and special technical aspects of acting for the camera. Prerequisites: TAI 182.

## TAI 380 Musical Theatre History 3(3-0)

A study of the development of American musical theatre and its relation to the continually changing social milieu by examining selected productions, creators, and performers.

## TAI 381 Directing 3(3-0)

Responsibilities, philosophies, and techniques of the stage director. Emphasis on preparation of scenes for evaluation. Prerequisite: TAI 182.

## TAI 382 Acting III 3(3-0)

Period movement patterns, pantomime techniques, and regional and cultural dialects, with individual scenes prepared for critical evaluation. Prerequisite: TAI 182, TAI 282.

## TAI 383 Voice for the Actor 3(3-0)

Vocal techniques for actors. Designed to provide the student with a general understanding of vocal technique and theory, as they apply to characterization and acting. Prerequisites: TAI 182; TAI 302.

## TAI 384 Movement for the Actor 3(3-0)

Movement techniques for actors. Designed to provide the student with a general understanding of movement technique and theory, as they apply to characterization and acting. Prerequisite: TAI 182.

## TAI 385 Audition Techniques 3(3-0)

Practical audition skills including monologue selection, analysis and performance, cold readings, audition etiquette and protocol. Prerequisites: TAI 182, 282.

## TAI 399 Theatre and the Holocaust 3(3-0)

*This course examines how theatre was/is used to represent and respond to the Holocaust and Nazi culture. Historical, political, ethical, and aesthetic questions are explored. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)*

**TAI 452 Music Theatre Performance 3(2-2)**

Analysis and presentation of solo and duet song selections. Synthesis of performing techniques in music, dance, and theatre in relation to various musical theatre styles. Prerequisites: TAI 352, MUS 250.

**TAI 460 BFA Capstone Project 3(0-6)**

Major capstone project in theatre (including music theatre) and/or interpretation. Prerequisite: Must be approved by TAI or Music Theatre faculty/staff advisor(s) prior to registration. Must be completed in final year of study.

**TAI 476 Lighting Design 3-6(Spec)**

Theory and application of basic principles used in designing lighting for theatre and dance. The course may be repeated once with higher level learning expectations. Prerequisite: TAI 177.

**TAI 477 Scene Design 3-6(Spec)**

Theory and application of basic principles used in designing scenery for the theatre. The course may be repeated once with higher level learning expectations. Prerequisite: TAI 177.

**TAI 478 Theatre Management 3(3-0)**

Concepts and methods of theatre management and promotion: box-office procedures, house management, and publicity.

**TAI 490 Independent Study 1-4(Spec)**

Student-initiated study guided by faculty member or faculty committee. Undergraduate prerequisites: an overall B average, permission of advisor and instructor (and completion of form).

**TAI 499 Senior Theatre Seminar 1(1-0)**

Seminar course that integrates academic and production experiences in theatre with student's career goals. Prerequisites: senior standing and completion of 30 hours of their TAI major.

**TAI 518 Advanced Make-up 3(2-2)**

Practical application of advanced make-up materials and techniques, including both two-dimensional and three-dimensional make-up. Prerequisite: TAI 278. Recommended: ART 260, 261.

**TAI 569 History of American Theatre 3(3-0)**

Development of drama and theater in America from colonial times to the present. Prerequisites: 6 hours of TAI coursework.

**TAI 570 Oral Interpretation of Prose Fiction 3(3-0)**

Specialized study of the short story and novel, in both individual and group performances. Prerequisites: one course in oral interpretation; one course in fictional literature.

**TAI 571 Oral Interpretation of Poetry 3(3-0)**

Specialized study of poetry. Prerequisites: one course in oral interpretation and one course in poetic literature.

**TAI 572 Special Topics in Oral Interpretation 1-9(Spec)**

Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisite: one course in oral interpretation and/or a major in English.

**TAI 573 Seminar: Interpretative Reading 3(3-0)**

History of the art of interpretative reading, its current theories and possible trends. Prerequisite: one course in interpretative reading.

**TAI 574 History of Drama and Theatre I 3(3-0)**

Development of drama and theatre in Western and Non-Western cultures from ancient origins to 1800. Prerequisites: Junior standing, TAI 280; or graduate standing.

**TAI 575 History of Drama and Theatre II 3(3-0)**

Development of drama and theatre in Western and Non-Western culture from 1800 to the present. Prerequisites: Junior standing, TAI 280; or graduate standing.

**TAI 577 Special Topics in Technical Theatre 1-9(Spec)**

Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisites: Two from the following: TAI 177, TAI 278, TAI 377, TAI 477.

**TAI 578 Special Topics in Theatre 1-9(Spec)**

Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisites: Two undergraduate courses in theatrical production.

**TAI 579 Costume Design and Construction 3(3-0)**

Concentration in the problems of design, pattern drafting, and construction of costumes for the theatre. Prerequisites: TAI 377; FMD 140.

**TAI 580 Dramatic Theory and Criticism 3(3-0)**

Analysis of significant theories of theatre and drama. Prerequisite: TAI 574 or TAI 575.

**TAI 581 Advanced Directing 3(3-0)**

Continuation of TAI 481, Directing. Emphasis on the rehearsal and performance of one-act plays for public presentation. Prerequisites: TAI 177 and TAI 481. Admission by approval of instructor only (contact TAD office for procedure).

**TAI 583 Women in the Contemporary American Theatre 3(3-0)**

Examines the contributions of women producers, directors, playwrights, actors, designers, and critics to the development of the contemporary American theatre. Prerequisites: 6 hours of TAI coursework.

**TAI 584 Field Course in Theatre 1-4(Spec)**

A travel course to metropolitan theatrical productions and institutions. Required are a pre-travel reading program and final reaction/evaluation paper.

**TAI 585 Creative Dramatics 3(2-2)**

Techniques of guiding children through original dramatizations. Primarily for the classroom teacher.

**TAI 586WI Playwriting 3(3-0)**

Theory and practice in writing original plays; discussion and critical evaluation of student plays. Writing Intensive. Prerequisites: ENG 201; ENG 294 or one course in history of drama and theatre.

**TAI 587 Irish Theatre and Drama 3(3-0)**

Development of theatre and drama in Ireland. Course requires travel to Dublin during Spring Break. Prerequisites: Permission of Instructor.

**TAI 588 Contemporary Theatre 3(3-0)**

Development of drama and theater in Western Culture from 1945 to the present. Prerequisites: 6 hours of TAI coursework.

**TAI 589 Theatre Workshop 2-6(Spec)**

Theoretical and practical work in productions of the University Theatre. Prerequisite: minimum of one course in theatre.

**TAI 590 Summer Repertory Theatre 3(3-0)**

Intensive practical theatre experience in the repertory situation under professional direction and guidance. Prerequisite: applicant admitted to course only through audition.

*For graduate level course descriptions above 600, consult the current Graduate Studies Bulletin.*

**TAI 602 Modern Performance Theory 3(3-0)****TAI 619 Continuing Registration for Final Research Project 1(1-0)****TAI 790 Advanced Independent Study 1-4(Spec)**

## TEL - Teaching English Learners

*For more information, contact the College of Education and Human Services.*

**TEL 300 Teaching Multilingual Learners: Birth-Grade 1 3(3-0)**

Teaching multilingual learners ages birth to 6 in early childhood learning environments and general education classrooms grades PK-1. Prerequisites: Junior standing or a signed TEL Minor.

**TEL 301 Teaching Multilingual Learners: Grades PK-6 3(3-0)**

Teaching English learners in general education classrooms grades PK-6. Prerequisites: ENG 101 with a grade of C or better; Admission to Teacher Education.

**TEL 302 Teaching Multilingual Learners: Grades 5-12 3(3-0)**

Teaching multilingual learners in general education classrooms grades 5-12. Prerequisites: Junior standing or a signed TEL Minor.

**TEL 500 Assessment Practices for Teachers of Multilingual Learners 3(3-0)**

Assessment practices for teachers of multilingual learners. Course will include Assessment certification: WIDA ACCESS for ELLs: 1-12. Prerequisites: TEL 300, TEL 301, or TEL 302 and signed a TEL Minor; or graduate standing.

**TEL 501 Teaching Multilingual Learners in the Sociocultural Context 3(3-0)**

Teaching multilingual learners within sociocultural contexts. Topics include implementing culturally-responsive, standards-aligned instruction. Prerequisites: TEL 300, TEL 301, or TEL 302 and signed a TEL Minor; or graduate standing.

**TEL 502 Practicum in Teaching Multilingual Learners 3(3-0)**

Application of skills and knowledge for teaching PK-12 multilingual learners. Includes a clinical experience. Prerequisites: TEL 500 and TEL 501; signed a TEL Minor or graduate standing.

## UNV - Prior Learning

*Contact the Prior Learning Assessment Team at [priorlrn@mich.edu](mailto:priorlrn@mich.edu) for more information.*

**UNV 297 Prior Learning 1-60(Spec)****UNV 497 Prior Learning 1-60(Spec)****UNV 697 Prior Learning 1-10(Spec)**

## WGS - Women and Gender Studies

*See the Interdisciplinary Women and Gender Studies Minor for more information, or contact the Women and Gender Studies office at [wgs@mich.edu](mailto:wgs@mich.edu).*

**WGS 100 How Gender Affects Our Lives 3(3-0)**

*An interdisciplinary course on the creation of gender inequalities. Students will delve into the complexities of gender identity from historical, contemporary, intersectional, and international perspectives. May be offered as Writing Intensive. This course may be offered in an online format. (University Program Group IV-A: Studies in Discrimination)*

**WGS 104 Women in STEM Fields 3(3-0)**

*This course explores the roles, stereotypes, and contributions of women in STEM (Science, Technology, Engineering, and Mathematics) fields, and the barriers they face. Identical to MTH 104. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)*

**WGS 141 The Self and Other in Photography 3(3-0)**

Examines how photography affirms identity, power, and social status. Covers representation of marginalized groups, such as indigenous people, women, and members of the LGBTQ community. Identical to ART 141. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)

**WGS 204 LGBTQ Identities 3(3-0)**

Explores the social and cultural contributions of LGBTQ individuals and communities as well as discrimination based on gender identity and sexuality. May be offered as Writing Intensive. Identical to ENG 204 and SOC 204. Credit may not be earned in more than one of these courses. Recommended: ENG 101. (University Program Group IV-A: Studies in Discrimination)

**WGS 207 Women in Religion 3(3-0)**

Explores gender as a category of analysis in the academic study of religion, including opportunities and challenges for women in major religious traditions. Identical to REL 207. Credit may be earned in more than one of these courses. May be offered as Writing Intensive. Recommended: ENG 201. (University Program Group IV-A: Studies in Discrimination)

**WGS 213 Introduction to Human Sexuality 3(3-0)**

Human sexual development throughout the life cycle. Emphasis on understanding and acceptance of self as a sexually functioning person. Identical to HDF 213. Credit may not be earned in more than one of these courses. This course may be offered in an online format. (University Program IV-A: Studies in Discrimination)

**WGS 226 From Witch Trials to Womens Liberation: Women in America 3(3-0)**

Study of the position of women in American society as documented in historical, literary, and biographical sources. Identical to HST 226. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

**WGS 230 Women in the Economy 3(3-0)**

A study of the past and present role of women in the economy, as workers, both inside and outside the labor market. Identical to ECO 230. Credit may not be earned in more than one of these courses.

**WGS 245 Gender Identities in Dialogue 3(3-0)**

Through small-group dialogues with peers, students will critically explore the role of gender in shaping identity, relationships, and social institutions. Identical to IGR 245. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)

**WGS 254 Women in European History 3(3-0)**

This survey emphasizes the contributions of women to European history including religious beliefs, family structures, diversity, and the control of knowledge and sexuality. Identical to HST 254. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**WGS 280 Queer Fashion 3(3-0)**

Examination of LGBTQ+ experiences via historical fashion analysis. Emphasis on LGBTQ+ identity fashioned through sartorial choice. Gay aesthetic, camp culture, and LGBTQ+ designer contributions. Identical to FMD 280. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)

**WGS 297 Special Topics in Women and Gender Studies 3-6(Spec)**

Course covers special topics of interest to Women and Gender Studies not covered in existing courses. Course title will be listed on student's transcript.

**WGS 302 Witchcraft, Magic, and Occult Phenomena 3(3-0)**

The history and theory of European witchcraft and demonology. Includes anthropology of witchcraft in non-Christian societies, gender and intersectionality, and new religious movements, like Wicca. Identical to REL 302. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. Prerequisite: ENG 201 with a grade of C or better. (University Program Group IV-A: Studies in Discrimination)

**WGS 303 Goddesses 3(3-0)**

Interdisciplinary study of goddesses in selected cultures, ancient and modern. Uses intersectionality to analyze opportunities and challenges inherent in gendering gods, including borrowing/reinventing goddesses today. Identical to REL 303. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. Prerequisite: ENG 201 with a grade of C or better. (University Program Group IV-A: Studies in Discrimination)

**WGS 317 Sociology of Gender 3(3-0)**

Analysis of the role of gender in institutions such as the economy, the family, and the schools. Gender inequality and factors that promote its reproduction. Identical to SOC 317. Credit may not be earned in more than one of these courses. Recommended: Either WGS 100 or prior coursework in Sociology. (University Program Group IV-A: Studies in Discrimination)

**WGS 319 Women and Sport 2(2-0)**

An investigation of the motivational and social implications of women's participation in sport. Identical to PES 319. Credit may not be earned in more than one of these courses.

**WGS 325 Telenovelas, Streaming Media and Hispanic/Latino Feminist Movements 3(3-0)**

Examination of the significance of Hispanic/Latino feminist movements as documented in history, literature, film, and media such as telenovelas and streaming series. Identical to SPN 325. Credit may not be earned in more than one of these courses. This course may be offered in an online format. (University Program Group I-A: Human Events and Ideas)

**WGS 326 Women and Politics 3(3-0)**

This course will look primarily at empirical studies of women's role in politics in the U.S. but also in other contexts. Identical to PSC 326. Credit may not be earned in more than one of these courses. This course may be offered in an online format. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**WGS 327 Women Writers: Gender, Sexuality, and Literature 3(3-0)**

Examination of women writers in a variety of historical and cultural traditions, approached through the lenses of feminist and queer theory. Identical to ENG 327. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. Prerequisite: ENG 201 with a grade of C or better. (University Program Group IV-A: Studies in Discrimination)

**WGS 334 Psychology of Women 3(3-0)**

Explores discrimination, barriers, and opportunities specific to women as related to psychological development, affective and cognitive functioning, personality, role behaviors, sexuality, mental health, and empowerment. Identical to PSY 334. Credit may not be earned in more than one of these courses. This course may be offered in an online format. (University Program Group IV-A: Studies in Discrimination)

**WGS 350 Women in Film 3(2-2)**

Critical analysis of films written, directed and produced by women, evaluated from a variety of theoretical viewpoints; emphasis on the underrepresentation of women. Identical to BCA 350. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**WGS 351 Queer Cinema 3(2-2)**

Introduction to the history, aesthetics and political/cultural importance of queer cinema. Identical to BCA 351. Credit may not be earned in more than one of these courses. Focus on the New Queer Cinema movement. May be offered as Writing Intensive. (University Program Group IV-A: Studies in Discrimination)

**WGS 362 Gender Communication 3(3-0)**

Focuses on the role of communication in creating and perpetuating gender stereotypes. Emphasis is on personal growth and awareness in a variety of contexts. Identical to COM 362. Credit may not be earned in more than one of these courses. (University Program Group IV-A: Studies in Discrimination)

**WGS 382 Gender and Art 3(3-0)**

Examines how gender identity and sexuality have affected art. Examines artists, patrons, viewers, and subjects of representations as gendered and historically specific entities. Identical to ART 382. Credit cannot be earned in more than one of these courses. Prerequisite: Completion of 56 credit hours.

**WGS 410 Women, Crime and Deviance 3(3-0)**

Exploring the theories, concepts, and social constructions fundamental to conceptualization of women as victims, offenders, and workers in the criminal justice system. Identical to SOC 410. Credit may not be earned in more than one of these courses. Prerequisites: SOC 301, 350.

**WGS 426 Feminist Theory 3(3-0)**

Examination of theories that describe and criticize the social, cultural and political status of women and offer alternatives to the status quo. Identical to PHL 426 and PSC 426. Credit may not be earned in more than one of these courses. Recommended: one course in philosophy or one of PSC 275, 326, 371, 372, 373, 378.

**WGS 430 Women and Aging 3(3-0)**

This course assumes multiple theoretical perspectives to examine older women's, psychological, social, and physical development, family and social roles, and policy implications. Identical to HDF 430. Credit may not be earned in more than one of these courses. This course may be offered online. Prerequisites: HDF 100 or 247 or PSY 325.

**WGS 496 Capstone Seminar in Women and Gender Studies 3(3-0)**

An interdisciplinary seminar integrating gender theory and research. Students complete a project that employs an intersectional lens. This course may be offered in an online format. Prerequisites: WGS 100 and WGS/PHL/PSC 426.

**WGS 497 Special Topics in Women and Gender Studies 3-6(Spec)**

Course covers special topics of interest to Women and Gender Studies not covered in existing courses. Course title will be listed on student's transcript. Recommended: 6 hours of coursework at the 300-level OR permission from instructor.



# Senior Officers 2023 «

**JAMES FRANKLIN BUJAKI JR** (2020) VICE PRES/INFO TECH-CIO, INFORMATION TECHNOLOGY, OFFICE OF; BS, MICHIGAN STATE UNIVERSITY

**JEFFERSON CAMPBELL** (2022) DEAN/ARTS & MEDIA, ARTS & MEDIA, COLLEGE OF THE; BME, WESTERN KENTUCKY UNIVERSITY; MM, UNIVERSITY OF NORTH CAROLINA SCHOOL OF THE ARTS; DA, UNIVERSITY OF NEBRASKA-LINCOLN

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**JENNIFER MARIE COTTER** (2010) INTERIM VICE PRES/ADVANCEMENT, DEVELOPMENT/STEWARDSHIP/PROSPECT RESEARCH; BSBA, CENTRAL MICHIGAN UNIVERSITY

**JOHN PATTISON DANNER** (2020) GENERAL COUNSEL, GENERAL COUNSEL; JD, ST MARY'S UNIVERSITY, SCHOOL OF LAW

**ROBERT OAKLEY DAVIES** (2018) PRESIDENT, PRESIDENT'S OFFICE; BSBA, UNIVERSITY OF NEVADA, RENO; MBA, UNIVERSITY OF OREGON; PHD, UNIVERSITY AT BUFFALO, THE STATE UNIVERSITY OF NEW YORK

**JENNIFER E DEHAEMERS** (2020) VICE PRES/STUDENT RECRUITMENT & RETENTION, STUDENT RECRUITMENT & RETENTION; BS, UNIVERSITY OF CENTRAL MISSOURI; MA, UNIVERSITY OF MISSOURI-COLUMBIA

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**MARY MORAN HILL** (1986) VICE PRES/FINANCE & ADMIN SVCS - CFO, FINANCE AND ADMINISTRATIVE SERVICES; BSBA, CENTRAL MICHIGAN UNIVERSITY; MBA, CENTRAL MICHIGAN UNIVERSITY

**KATHY MAUREEN IRWIN** (2013) DEAN/UNIVERSITY LIBRARIES, LIBRARIES - DEAN'S OFFICE; BS, CONCORDIA COLLEGE; MLS, WAYNE STATE UNIVERSITY; MPA, UNIVERSITY OF MICHIGAN-DEARBORN

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**ELIZABETH ANN KIRBY** (2004) VICE PRES/INNOVATION & ONLINE, INNOVATION & ONLINE; BFA, DRAKE UNIVERSITY; MA, CENTRAL MICHIGAN UNIVERSITY; EDD, CENTRAL MICHIGAN UNIVERSITY

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**NANCY E MATHEWS** (2022) PROVOST/EXECUTIVE VICE PRESIDENT, PROVOST'S OFFICE; BS, PENNSYLVANIA STATE UNIVERSITY; MS, STATE UNIVERSITY OF NEW YORK; PHD, STATE UNIVERSITY OF NEW YORK

**CHRISTOPHER REYNOLD MOBERG** (2019) DEAN/BUSINESS ADMIN, CBA - DEAN'S OFFICE; BBA, UNIVERSITY OF NEW MEXICO; MBA, MIAMI UNIVERSITY; DBA, CLEVELAND STATE UNIVERSITY

**JULIA HELEN MONTROSS** (2008) INT ASSOC VICE PRES/FINANCIAL SVCS & REP, ACCOUNTING SERVICES; BA, KALAMAZOO COLLEGE; MBA, UNIVERSITY OF CHICAGO

**KALEB G PATRICK** (2016) ASSOC VICE PRES/INNOVATION & ONLINE, INNOVATION & ONLINE; BA, FERRIS STATE UNIVERSITY; MAHUM, CENTRAL MICHIGAN UNIVERSITY; SPE, CENTRAL MICHIGAN UNIVERSITY; EDD, CENTRAL MICHIGAN UNIVERSITY

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**TIMOTHY JOHN PETERS** (2007) ASSOC DEAN/UNIVERSITY LIBRARIES, LIBRARIES - DEAN'S OFFICE; BA, UNIVERSITY OF WISCONSIN; MLIS, LOUISIANA STATE UNIVERSITY; MA, MICHIGAN STATE UNIVERSITY

**SETHU REDDY** (2017) SR ASSOC DEAN/RESEARCH, MEDICINE, COLLEGE OF; BM, MEM UNIVERSITY OF NEWFOUNDLAND; MD, MEMORIAL UNIVERSITY OF NEWFOUNDLAND

**TOBIAS ANTON ROTH JR** (2001) ASSOC VICE PRES/GOV & EXTERNAL RELATIONS, GOVERNMENT & EXTERNAL RELATIONS; BA, LAWRENCE UNIVERSITY; JD, MARQUETTE UNIVERSITY

**RICHARD M ROTHHAUS** (2018) DEAN/LIBERAL ARTS & SOCIAL SCIENCES, LIBERAL ARTS & SOCIAL SCI, COLLEGE OF; PHD, OHIO STATE UNIVERSITY

**MANUEL R RUPE** (2009) SR ASSOC DEAN/LEGAL AFFAIRS/CMED, MEDICINE, COLLEGE OF; BA, KALAMAZOO COLLEGE; JD, DEPAUL UNIVERSITY; PHD, WESTERN MICHIGAN UNIVERSITY

**JONATHAN S RUSSELL** (2008) ASSOC DEAN/ARTS & MEDIA, ARTS & MEDIA, COLLEGE OF THE; BFA, SOUTHERN ILLINOIS UNIVERSITY CARBONDALE; MFA, FORT HAYS STATE UNIVERSITY

**STAN L SHINGLES** (1989) ASST VICE PRES/UNIV REC & STUDENT ENGAGE, UNIVERSITY RECREATION; BS, ILLINOIS STATE UNIVERSITY; MS, ILLINOIS STATE UNIVERSITY

**KARL L SMART** (2002) ASSOC DEAN/BUSINESS ADMIN, CBA - DEAN'S OFFICE; BA, UNIVERSITY OF UTAH; MA, UTAH STATE UNIVERSITY; PHD, UNIVERSITY OF FLORIDA

**MARCIA MARY TAYLOR** (1996) ASSOC DEAN/LIBERAL ARTS & SOCIAL SCIENCE, LIBERAL ARTS & SOCIAL SCI, COLLEGE OF; BS, UNIVERSITY OF IDAHO; BA, UNIVERSITY OF IDAHO; MA, UNIVERSITY OF IDAHO; PHD, UNIVERSITY OF WASHINGTON

**TINA L THOMPSON** (2017) SR ASSOC DEAN/ACADEMIC AFFAIRS/CMED, MEDICINE, COLLEGE OF; PHD, TEXAS CHRISTIAN UNIVERSITY

**CHRISTOPHER TYCNER** (2007) ASSOC DEAN/SCIENCE & ENGINEERING, SCIENCE & ENGINEERING, COLLEGE OF; BSCE, UNIVERSITY OF WESTERN ONTARIO; MSC, UNIVERSITY OF TORONTO; PHD, UNIVERSITY OF TORONTO

**JOHN M VEILLEUX** (2020) VICE PRES/UNIV COMM & CHIEF MKTG OFC, UNIVERSITY COMMUNICATIONS; BS, UNIVERSITY OF NORTH TEXAS; CERT, TARLETON STATE UNIVERSITY; MBA, TEXAS WESLEYAN UNIVERSITY

**RENEE T WATSON** (2022) VICE PRES/STUDENT AFFAIRS, STUDENT AFFAIRS; EDD, NORTHERN KENTUCKY UNIVERSITY

**JONATHAN D WEBB** (2016) ASSOC VICE PRES/FACILITIES MANAGEMENT, FACILITIES MANAGEMENT; BS, OHIO STATE UNIVERSITY; MA, WEBSTER UNIVERSITY

**DAVID C WEINDORF** (2020) VICE PRES/RESEARCH & INNOVATION, RESEARCH & GRADUATE STUDIES; BS, TEXAS TECH UNIVERSITY; MS, TEXAS TECH UNIVERSITY; PHD, TEXAS TECH UNIVERSITY

**GREGORY ROBERT ZIMMERMAN** (2019) ASSOC DEAN/HEALTH PROFESSIONS, THE HH & GA DOW COLLEGE OF HEALTH PROF; PHD, NOVA SOUTHEASTERN UNIVERSITY

\*The year in parentheses indicates the date of appointment at CMU.



## » Faculty 2023

**HATEM ABBAS** (2021) FIXED-TERM FACULTY, ENGINEERING & TECHNOLOGY, SCHOOL OF; PHD, THE UNIVERSITY OF MANCHESTER

**AHMED MOHAMED ABDELGAWAD** (2012) PROFESSOR, ENGINEERING & TECHNOLOGY, SCHOOL OF; BS, MANSOURA UNIVERSITY; MS, UNIVERSITY OF LOUISIANA AT LAFAYETTE; PHD, UNIVERSITY OF LOUISIANA AT LAFAYETTE

**LAWRENCE ADAMITIS** (2018) FIXED-TERM FACULTY, POLITICS, SOCIETY, JUSTICE & PUBLIC SERV; BA, ST JOHN FISHER COLLEGE; MPA, MARIST COLLEGE; PHD, RUTGERS UNIVERSITY

**JOSHUA D ADAMS** (2020) DIRECTOR OF ELI, ENGLISH LANGUAGE INSTITUTE; BAA, CENTRAL MICHIGAN UNIVERSITY; MA, DANKOOK UNIVERSITY

**PRAKASH ADHIKARI** (2011) PROFESSOR, POLITICS, SOCIETY, JUSTICE & PUBLIC SERV; BA, NORTH-EASTERN HILL UNIVERSITY; MA, TRIBHUVAN UNIVERSITY; MA, UNIVERSITY OF NEW MEXICO; PHD, THE UNIVERSITY OF NEW MEXICO

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**FAHIM AHMED** (2022) FIXED-TERM FACULTY, PHYSICS; MS, CENTRAL MICHIGAN UNIVERSITY; BS, DHAKA UNIVERSITY; MS, DHAKA UNIVERSITY; PHD, CENTRAL MICHIGAN UNIVERSITY

**ROBB AKEY** (2018) INSTRUCTOR, ATHLETICS; BS, WEBER STATE

**CONCHA K ALLEN** (2006) PROFESSOR, MARKET & HOSPITALITY SERVICES ADMINISTRATION; BA, TEXAS TECH UNIVERSITY; MBA, UNIVERSITY OF SOUTH ALABAMA; PHD, UNIVERSITY OF NORTH TEXAS

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**MOHAMED AMEZZIANE** (2013) PROFESSOR, STATISTICS, ACTUARIAL & DATA SCIENCES; MS, UNIVERSITY OF CENTRAL FLORIDA; MS, UNIVERSITY OF CENTRAL FLORIDA; PHD, UNIVERSITY OF CENTRAL FLORIDA

**ABU AMIN** (2015) ASSOCIATE PROFESSOR AND CHAIRPERSON, FINANCE AND LAW; BBA, UNIVERSITY OF DHAKA; MBA, UNIVERSITY OF DHAKA; MSC, UNIVERSITY OF NOTTINGHAM; PHD, UNIVERSITY OF HOUSTON

**RUHUL AMIN** (2022) POST DOCTORAL RESEARCHER, PHYSICS; BS, ALIGARH MUSLIM UNIVERSITY; MS, ALIGARH MUSLIM UNIVERSITY; PHD, INDIAN INSTITUTE OF TECHNOLOGY INDORE

**VIKESH AMIN** (2012) PROFESSOR, ECONOMICS; BS, UNIVERSITY COLLEGE LONDON; MS, UNIVERSITY COLLEGE LONDON; PHD, ROYAL HOLLOWAY, UNIVERSITY OF LONDON

**SU KYOUNG AN** (2010) PROFESSOR, FASHION, INTERIOR DESIGN & MERCHANDISING; BS, PAI CHAI UNIVERSITY; MA, WASHINGTON STATE UNIVERSITY; PHD, OKLAHOMA STATE UNIVERSITY

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**WILLIAM W ANDERSON** (2002) PROFESSOR, BROADCAST & CINEMATIC ARTS, SCHOOL OF; BA, LORAS COLLEGE; MS, UNIVERSITY OF WISCONSIN AT WHITEWATER; MA, NORTHERN ILLINOIS UNIVERSITY; EDD, NORTHERN ILLINOIS UNIVERSITY

**JOHN MICHAEL ANDRAKA** (2013) ASSISTANT PROFESSOR, PHYSICAL THERAPY PROGRAM; BS, EAST STROUDSBURG UNIVERSITY; DPT, DREXEL UNIVERSITY

**JEFFREY J ANGERS** (1997) PROFESSOR, HUMAN DEVELOPMENT & FAMILY STUDIES; BS, CENTRAL MICHIGAN UNIVERSITY; MS, IOWA STATE UNIVERSITY; PHD, IOWA STATE UNIVERSITY

**BRANDIS ANSLEY** (2018) ASSOCIATE PROFESSOR, TEACHER & SPECIAL EDUCATION; BA, AUGUSTA UNIVERSITY; MS, UNIVERSITY OF SOUTH CAROLINA; PHD, GEORGIA STATE UNIVERSITY

**THOMAS ANTHONY** (1986) ASSISTANT PROFESSOR, FINANCE AND LAW; BA, ALMA COLLEGE; JD, UNIVERSITY OF DETROIT

**ELLEN W ARMBRUSTER** (2013) PROFESSOR, COUNSELING, ED LEADERSHIP & HIGHER ED; BA, UNIVERSITY OF COLORADO - BOULDER; MA, UNIVERSITY OF NEW MEXICO; MA, UNIVERSITY OF NEW MEXICO; PHD, UNIVERSITY OF NEW MEXICO

**ALLISON KELSEY ARNEKRANS** (2014) ASSOCIATE PROFESSOR, COUNSELING, ED LEADERSHIP & HIGHER ED; BA, BOWLING GREEN STATE UNIVERSITY; MA, UNIVERSITY OF TOLEDO; PHD, UNIVERSITY OF TOLEDO

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**JASON C ARTERO** (2009) FIXED-TERM FACULTY, TEACHER & SPECIAL EDUCATION; BS, CENTRAL MICHIGAN UNIVERSITY; MA, MARYGROVE COLLEGE; EDD, CENTRAL MICHIGAN UNIVERSITY

**MONICA JANE ASHBY** (2009) PROFESSOR, PSYCHOLOGY; BA, OHIO STATE UNIVERSITY; MAED, HARVARD GRADUATE SCHOOL OF EDUCATION; MS, UNIVERSITY OF MASSACHUSETTS - AMHERST; PHD, UNIVERSITY OF MASSACHUSETTS - AMHERST

**AHMED M ASSAF** (1989) PROFESSOR, MATHEMATICS; BA, HAIFA UNIVERSITY; MA, HAIFA UNIVERSITY; DSC, TECHNION-ISRAEL INSTITUTE OF TECHNOLOGY

**RENEE LOUISE BABCOCK** (2009) OFF-CAMPUS ADJUNCT FACULTY, GLOBAL CAMPUS; AB, HOPE COLLEGE; MA, HOFSTRA UNIVERSITY; MS, GEORGIA INSTITUTE OF TECHNOLOGY; PHD, GEORGIA INSTITUTE OF TECHNOLOGY

**BETH BAILEY** (2019) PROFESSOR, MEDICINE, COLLEGE OF; BS, UNIVERSITY OF MICHIGAN FLINT; MA, WAYNE STATE UNIVERSITY; PHD, WAYNE STATE UNIVERSITY

**STEVEN KENNETH BAILEY** (2010) PROFESSOR, ENGLISH LANGUAGE AND LITERATURE; BA, UNIVERSITY OF MASSACHUSETTS-AMHERST; MFA, UNIVERSITY OF ALASKA-FAIRBANKS; PHD, MICHIGAN TECHNOLOGICAL UNIVERSITY

\*The year in parentheses indicates the date of appointment at CMU. This list includes regular and full-time temporary faculty.

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**JESSE L BAKKE** (2018) ASSISTANT PROFESSOR, MEDICINE, COLLEGE OF; BS, UNIVERSITY OF HAWAII MANUA; PHD, UNIVERSITY OF CALIFORNIA DAVIS

**DANIEL EUGENE BALLOU** (2016) ASSOCIATE PROFESSOR, PHYSICAL EDUCATION & SPORT; BS, EMPORIA STATE UNIVERSITY; MS, UNIVERSITY OF NEW MEXICO; PHD, UNIVERSITY OF NEW MEXICO

**NICOLE SPARLING BARCO** (2009) PROFESSOR, ENGLISH LANGUAGE AND LITERATURE; BS, NAZARETH COLLEGE OF ROCHESTER; MA, PENN STATE UNIVERSITY; PHD, THE PENNSYLVANIA STATE UNIVERSITY

**CHERYL LYNNETTE BARDEN** (2009) FIXED-TERM FACULTY, COMMUNICATION SCIENCES & DISORDERS; BS, CENTRAL MICHIGAN UNIVERSITY; MA, CENTRAL MICHIGAN UNIVERSITY

**AMANDA BARONE** (2022) FIXED-TERM FACULTY, COMMUNICATION SCIENCES & DISORDERS; MS, MISERICORDIA UNIVERSITY

**NICHOLAS A BARONE** (2020) ASSISTANT PROFESSOR, COMMUNICATION SCIENCES & DISORDERS; BA, UNIVERSITY OF PITTSBURGH; MS, MISERICORDIA UNIVERSITY; PHD, JAMES MADISON UNIVERSITY

**VERONICA BARONE** (2011) PROFESSOR, PHYSICS; PHD, UNIVERSITY OF BUENOS AIRES

**RACHAEL SARAH BARRON-DUNCAN** (2009) ASSOCIATE PROFESSOR, ART AND DESIGN; AB, VASSAR COLLEGE; MA, YALE UNIVERSITY; MPHIL, YALE UNIVERSITY; PHD, YALE UNIVERSITY GRADUATE SCHOOL OF ARTS AND SCIENCES

**MICHELE ANN-WEIGEL BARTOSEK** (2014) FIXED-TERM FACULTY, BUSINESS INFORMATION SYSTEMS; MBA, NORTHWOOD UNIVERSITY

**BHARATI BASU** (1990) PROFESSOR, ECONOMICS; BA, CALCUTTA UNIVERSITY; MA, UNIVERSITY OF ROCHESTER; PHD, UNIVERSITY OF ROCHESTER

**JAMES C BATCHELLER** (2000) PROFESSOR, MUSIC, SCHOOL OF; BS, CENTRAL MICHIGAN UNIVERSITY; MM, FLORIDA STATE UNIVERSITY; DMA, UNIVERSITY OF OKLAHOMA

**JAY C BATZNER** (2009) PROFESSOR, MUSIC, SCHOOL OF; BM, UNIVERSITY OF KANSAS - MAIN CAMP; MM, UNIVERSITY OF KANSAS - MAIN CAMP; MM, UNIVERSITY OF LOUISVILLE; DMA, UNIVERSITY OF MISSOURI - KANSAS CITY

**MARTIN A BAXTER** (2006) PROFESSOR, EARTH AND ATMOSPHERIC SCIENCES; BS, UNIVERSITY OF MISSOURI AT COLUMBIA; MS, SAINT LOUIS UNIVERSITY; PHD, SAINT LOUIS UNIVERSITY

**ANDREW BAZAKIS** (2022) ASSOCIATE PROFESSOR, MEDICINE, COLLEGE OF; BS, UNIVERSITY OF MICHIGAN; MD, MICHIGAN STATE UNIVERSITY

**JEFFREY P BEAN** (2008) PROFESSOR, ENGLISH LANGUAGE AND LITERATURE; BMUS, OBERLIN COLLEGE; MFA, UNIVERSITY OF ALABAMA

**BRIAN L BECKER** (2002) PROFESSOR, GEOGRAPHY & ENVIRONMENTAL STUDIES; BS, EASTERN ILLINOIS UNIVERSITY; MS, UNIVERSITY OF ILLINOIS; PHD, MICHIGAN STATE UNIVERSITY

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**CURTIS D BELL** (2022) INSTRUCTOR, ATHLETICS; BS, AQUINAS COLLEGE

**HAROLD JAMES BELL** (2012) PROFESSOR, MEDICINE, COLLEGE OF; BS, UNIVERSITY OF TORONTO; MS, UNIVERSITY OF TORONTO; PHD, UNIVERSITY OF TORONTO

**ROBERT MAXWELL BELL** (2015) FIXED-TERM FACULTY, NUTRITION & DIETETICS PROGRAM; BS, CENTRAL MICHIGAN UNIVERSITY

**CAITLIN BENALLACK** (2018) ASSISTANT PROFESSOR, LIBRARY RESEARCH & INSTRUCTION SERVICES; BA, CENTRAL MICHIGAN UNIVERSITY; MLS, INDIANA UNIVERSITY - BLOOMINGTON

**BENJAMIN DOUGLAS BENNETT** (2013) INSTRUCTOR, ATHLETICS; BS, CENTRAL MICHIGAN UNIVERSITY

**MISTY MARIE BENNETT** (2009) ASSOCIATE PROFESSOR, MANAGEMENT; BS, CENTRAL MICHIGAN UNIVERSITY; MA, CENTRAL MICHIGAN UNIVERSITY; PHD, CENTRAL MICHIGAN UNIVERSITY

**LORRAINE SUSAN BERAK** (1989) PROFESSOR, TEACHER & SPECIAL EDUCATION; BS, NORTHERN MICHIGAN UNIVERSITY; MA, CENTRAL MICHIGAN UNIVERSITY; PHD, MICHIGAN STATE UNIVERSITY

**ARI BERK** (1999) PROFESSOR, ENGLISH LANGUAGE AND LITERATURE; BA, HUMBOLDT STATE UNIVERSITY; MA, UNIVERSITY OF ARIZONA; PHD, UNIVERSITY OF ARIZONA

**STEVEN DAVID BERKSHIRE** (2008) FIXED-TERM FACULTY, HEALTH ADMINISTRATION; BA, UNIVERSITY OF COLORADO; MHA, INDIANA UNIVERSITY SCHOOL OF MEDICINE; EDD, BOSTON UNIVERSITY

**JEFFERY J BETTS** (1993) PROFESSOR, HEALTH SCIENCES, SCHOOL OF; BS, CENTRAL MICHIGAN UNIVERSITY; MS, BALL STATE UNIVERSITY; PHD, OHIO STATE UNIVERSITY

**MICHELLE FRANCINE BIGARD** (2001) PROFESSOR, COUNSELING CENTER; BA, UNIVERSITY OF WATERLOO; MSW, WILFRID LAURIER UNIVERSITY

**LINDA E BINKLEY** (2010) PROFESSOR, MUSIC, SCHOOL OF; DMA, THE UNIVERSITY OF ARIZONA

**KRISTEN JOO BIRCH** (2022) FIXED-TERM FACULTY, COMMUNICATION SCIENCES & DISORDERS; BS, WESTERN MICHIGAN UNIVERSITY; BS, UNIVERSITY OF NORTHERN COLORADO; AU D, UNIVERSITY OF WASHINGTON

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**AVERY N BLACKMON** (2021) INSTRUCTOR, ATHLETICS; BA, GEORGETOWN COLLEGE

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**JUDY BLEBEA** (2018) PROFESSOR, MEDICINE, COLLEGE OF; BS, CITY COLLEGE OF THE CITY UNIVERSITY OF NEW YORK; MMED, STATE UNIVERSITY OF NEW YORK HEALTH; DMED, STATE UNIVERSITY OF NEW YORK

**MEGHAN KATHLEEN BLOCK** (2013) ASSOCIATE PROFESSOR, TEACHER & SPECIAL EDUCATION; BAED, UNIVERSITY OF MICHIGAN; MAED, NORTHERN ILLINOIS UNIVERSITY; PHD, MICHIGAN STATE UNIVERSITY

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**EMILY K BLOESCH** (2013) ASSOCIATE PROFESSOR, PSYCHOLOGY; BS, MILLIKIN UNIVERSITY; MA, WESTERN KENTUCKY UNIVERSITY; PHD, WASHINGTON UNIVERSITY ST LOUIS

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**JAMES BODRIE** (2021) ASSISTANT PROFESSOR, MEDICINE, COLLEGE OF; BA, UNIVERSITY OF CALIFORNIA, DAVIS; MD, MICHIGAN STATE UNIVERSITY

**BRUCE MARSHALL BONNELL** (2000) PROFESSOR, MUSIC, SCHOOL OF; BMU, MEMORIAL UNIVERSITY OF NEWFOUNDLAND; MM, NORTHWESTERN UNIVERSITY; DM, INDIANA UNIVERSITY

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**LORI BOYLE** (2021) FIXED-TERM FACULTY, TEACHER & SPECIAL EDUCATION; BS, EVANGEL UNIVERSITY; MA, NOVA SOUTHEASTERN UNIVERSITY

**ELIZABETH ANNE BRADSHAW** (2012) PROFESSOR, POLITICS, SOCIETY, JUSTICE & PUBLIC SERV; AA, OAKLAND COMMUNITY COLLEGE; BS, CENTRAL MICHIGAN UNIVERSITY; MA, WESTERN MICHIGAN UNIVERSITY; PHD, WESTERN MICHIGAN UNIVERSITY

**TIMOTHY A BRANNAN** (2002) PROFESSOR, TEACHER & SPECIAL EDUCATION; BS, MICHIGAN TECHNOLOGICAL UNIVERSITY; MA, MICHIGAN STATE UNIVERSITY; MBA, CENTRAL MICHIGAN UNIVERSITY; DPH, MICHIGAN STATE UNIVERSITY

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**CHRISTI BROOKES** (2004) PROFESSOR, HISTORY, WORLD LANGUAGES & CULTURES; BA, UNIVERSITY OF ARIZONA; MA, PENNSYLVANIA STATE UNIVERSITY; PHD, PENNSYLVANIA STATE UNIVERSITY

**JODI BROOKINS FISHER** (1996) PROFESSOR, HEALTH SCIENCES, SCHOOL OF; BS, CENTRAL MICHIGAN UNIVERSITY; MS, BALL STATE UNIVERSITY; PHD, UNIVERSITY OF UTAH

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**JAMIE LYNN H BROWN** (1999) ASST DIR/CAREER DEVELOPMENT CENTER, CAREER DEVELOPMENT CENTER; BS, INDIANA UNIVERSITY; MA, CENTRAL MICHIGAN UNIVERSITY

**TRACY L BROWN** (2005) PROFESSOR, PHILOSOPHY, ANTHROPOLOGY & RELIGION; BA, HOBART AND WILLIAM SMITH COLLEGE; MA, UNIVERSITY OF CONNECTICUT; PHD, DUKE UNIVERSITY

**JORDAN ROSS BRUURSEMA** (2010) FIXED-TERM FACULTY, RECREATION PARKS & LEISURE SERVICES; BS, CENTRAL MICHIGAN UNIVERSITY; MA, CENTRAL MICHIGAN UNIVERSITY; AS, COLORADO MOUNTAIN COLLEGE

**JOHN FINDLATER BUNCH** (2016) FIXED-TERM FACULTY, MANAGEMENT; BA, UNIVERSITY OF MICHIGAN - ANN ARBOR; PHD, UNIVERSITY OF NORTH CAROLINA - CHAPEL HILL

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**BRITTNEY LYNN THOMAS** (2022) ASSOC DIR/GEAR UP/COLLEGE DAY, GEAR UP; BA, UNIVERSITY OF MICHIGAN - FLINT; MA, UNIVERSITY OF MICHIGAN - FLINT

**TISA MOIRAE THOMPSON-BETZ** (2015) ASSOC DIR/ONLINE STUDENT SVCS, CMU ONLINE; BA, HOPE COLLEGE; MBA, DAVENPORT UNIVERSITY

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**MEGAN AMANDA VARNER** (2015) DIR/SEXUAL AGGRESSION SERVICES, COUNSELING CENTER; BS, CENTRAL MICHIGAN UNIVERSITY; M OF COUNSELING, CENTRAL MICHIGAN UNIVERSITY

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**KEITH E VOEKS** (1990) ASST DIR/UNIV EVENTS, UNIVERSITY EVENTS; BFA, CENTRAL MICHIGAN UNIVERSITY

**MAGGIE ELIZABETH VOISIN** (2021) ASST DIR/ADMISSIONS, UNDERGRADUATE RECRUITMENT - ADMISSIONS; BAA, CENTRAL MICHIGAN UNIVERSITY

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**LING ZHANG** (2019) DIR/GRADUATE & INTERNATIONAL RCMT, INTERNATIONAL RECRUITMENT - ADMISSIONS; AA, ANHUI SCIENCE & TECHNOLOGY UNIVERSITY; BA, ANHUI INSTITUTE OF EDUCATION; MA, DAKOTA WESLEYAN UNIVERSITY; PHD, UNIVERSITY OF SOUTH DAKOTA

**DONALD R ZIEHMER** (2021) MGR/DISTRIBUTED IT OPERATIONS/HCIT, MEDICINE, COLLEGE OF; BBA, SAGINAW VALLEY STATE UNIVERSITY; MSA, CENTRAL MICHIGAN UNIVERSITY

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# Emeriti Faculty and Staff 2023 «

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**Nicki Rae Acker** (1980-2008) Assistant Director of Career Services, Career Services

**Fawui Abalo Adewui** (2001-2019) Professor, Teacher Education and Professional Development

**Bruce H. Allen** (1991-2012) Professor, Marketing and Hospitality Services Admin.

**Frederick Allen** (1995-2007) Professor, Politics, Society, Justice & Public Service

**Keith Allen** (1960-1994) Associate Professor, Teacher Education and Professional Development

**Richard K. Allen** (1967-1997) Professor, Communication and Dramatic Arts

**David E. Alsager** (1977-2003) Coordinator, Open Recreational Programs, University Recreation

**Ann L. Alvesteffer** (1991-2022) Director/Faculty Employment & Compensation, Faculty Personnel Services

**Frank Andera** (1988-2017) Professor, Business Information Systems

**James Roy Angelos** (1982-2018) Professor, Mathematics

**Ronnie Susan Apter** (1986-2009) Professor, English

**Philip D. Arben** (1981-1999) Professor, Management & Law

**Gary W. Arbogast** (1987-2014) Professor, Physical Education & Sport

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**Lois Arnold** (1980-2018) President/CEO, Michigan Special Olympics, Michigan Special Olympics

**I-Ming Wang Aron** (1982-2009) Senior Systems Administrator, Information Technology

**Robert H. Aron** (1976-2010) Professor, Geography & Environmental Studies

**David E. Ash** (2005-2020) Vice President/Research & Dean/Grad Studies, Research and Graduate Studies, Office of

**Renee L. Babcock-Wolf** (1997-2022) Professor, Psychology

**Richard W. Backs** (1995-2020) Professor, Psychology

**Mahmood Bahaee** (1985-2019) Professor, Management

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**Michael C. Ball** (1978-2020) Senior Systems Administrator, Information Technology

**Sharon Balogh** (1981-2003) Nursing Supervisor, University Health Services

**Thomas R. Bambas** (1969-1999) Professor, Art and Design

**Jayanta K. Bandyopadhyay** (1979-2012) Professor, Management

**Robert A. Barclay** (1980-2013) Director/Photography, University Communications

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**Donald B. Beere** (1971-2000) Professor, Psychology

**Daniel Wilson Benjamin** (1972-2012) Director/Intro Biology Labs, Biology

**Thomas Benjamin** (1981-2014) Professor, History

**Edmund W. Benson** (1967-2006) Associate Professor, Chemistry and Biochemistry

**Patricia Palmer Benson** (2000-2011) Director, Center for Excellence for Education

**John B. Bergeson** (1970-1995) Professor, Teacher Education and Professional Development

**Steven Berglund** (1986-2021) Chairperson, Theatre and Dance

**Donald Paul Bertsch** (1960-2000) Professor/Director, Counseling Center

**Linda Hartley Bettisworth** (1985-2003) Prospect Research Coordinator, Advancement

**Elaine Filusch Betts** (1993-2020) Professor, Physical Therapy Program

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**Walter James Bisard** (1968-2001) Professor, Physics

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**Roger G. Bland** (1967-2000) Professor, Biology

**Caren Adele Blancy** (2007-2019) Safety Administrator, Risk Management, Environmental Health & Safety

**Dale Malotte Blount** (1968-1997) Associate Professor, English

**Bonnie Lucille Bohannon** (1975-2010) Coordinator/Academic Services, Global - On Campus

**Frank J. Boles** (1991-2021) Director/Clarke Historical Library, Clarke Historical Library

**Kathy M. Bontrager** (1981-2006) SAP Campus Management Systems Analyst, SAP Project Team

**James E. Born** (1969-1998) Professor, Art and Design

**Judith S. Boyd** (1985-2011) Assistant Director/Financial Aid, Scholarships & Financial Aid

**Daniel J. Bracken** (1983-2019) Director/New Media Initiatives, Liberal Arts and Social Sciences, College of

**Christopher A. Bradshaw** (1988-2022) Director/University Printing, Printing Services

**Thomas L. Brauch** (1986-2019) Lecturer, English

**Jorge A. Brea** (1988-2021) Professor, Geography & Environmental Studies

**William Brevda** (1986-2020) Professor, English

**Ann Marie Bridges** (1973-1996) Administrator, Science/Math/Technology Center

**Peggy Brisbane** (1985-2013) Associate Director/Creative Services/Photography, University Communications

**Elizabeth Marie Brockman** (1996-2022) Professor, English

**James B. Broestl** (2001-2013) Assistant Director/Marketing & Sales, Global - Off Campus

**Robert G. Bromley** (1981-2018) Professor, Accounting, School of

**Audrey L. Brown** (1994-2020) Coordinator/IACUC, Research and Graduate Studies, Office of

**Elizabeth J. Brown** (1976-2001) Professor, Music, School of

**James A. Bruss** (2004-2014) Senior Development Officer/Planned and Major Gifts, Advancement

**Nancy Buerkel-Rothfuss** (1980-2015) Professor, Communication and Dramatic Arts



- David Lee Bunting** (2000-2022) Director/Operations & Gift Administration, Advancement
- James R. Burke** (1978-2011) Manager/Bovee UC, University Center
- Roy F. Burlington** (1970-2002) Professor, Biology
- Sandra E Cain** (1973-2003) Professor, Early Childhood and Elementary Ed, Teacher Education and Professional Development
- J. Timothy Caldwell** (1974-2010) Professor, Music, School of
- Larry D. Caldwell** (1961-2004) Professor, Biology
- Lenora D. Calkins** (1998-2022) Research Officer, Research and Graduate Studies, Office of
- Jerry D. Campbell** (1995-2006) Trustee, Board of Trustees
- Sarah A. Campbell** (1966-2008) Director, University Health Services
- Gail M. Capehart** (1996-2011) Professor, Physical Therapy Program
- Joyce L. Capen** (1971-2000) Programmer Analyst, Information Technology
- James Joseph Cappel** (1997-2020) Professor, Business Information Systems
- Michael Patrick Carey** (1967-1992) Director, Placement
- James L. Carroll** (1971-1998) Professor, Psychology
- A. Aydin Cecen** (1984-2021) Professor, Economics
- Carmen Ceja-Blohm** (2005-2022) Coordinator/Faculty Approval Services, Academic Development
- Thomas John Centko** (1995-2006) Manager/Upper Peninsula, Michigan Special Olympics
- Robert Allan Chaffer** (1970-2005) Associate Professor, Mathematics
- Jeanne L. Chaffin** (2001-2019) Lecturer, Human Environmental Studies
- Debasish Chakraborty** (1988-2020) Professor, Economics
- Gerald T. Church** (1981-2013) Professor, Communication Sciences and Disorders
- Robert Grant Clason** (1967-1997) Professor, Mathematics
- Richard B. Clemmer** (1982-2007) Associate Professor, Economics
- Katherine H. Clendening** (1984-2014) Research Analyst/Faculty Support/Assessment, Global - On Campus
- Loren R. Clifford** (1966-2000) Professor, Physics
- Patrick F. Coakley** (1988-2002) Associate Director, Career Services
- Mary Ellen Coldwell** (1977-2010) Coordinator/Retirement Programs, Human Resources/Staff
- Roger Coles** (1973-2017) Interim Vice Provost for Community Engagement, Graduate Studies, College of
- Roberta M. Comiska** (1987-2011) Program Administrator, Global - Off Campus
- Vivian M. Como** (1980-2011) Assistant Director/Career Services, Career Services
- Robert Connell** (1962-1981) Registrar, Registrar's Office
- Timothy Connors** (1989-2018) Professor, Communication and Dramatic Arts
- Catherine A. Corderman** (1986-2002) Program Administrator, Global - Off Campus
- Steven A. Couture** (1996-2020) Lecturer, English Language Institute
- C. W. Cowles** (1995-2018) Lecturer, Political Science
- Mary K. Coxon** (1964-2000) Assistant Manager, Bookstore
- Monica Hines Craig** (1988-2019) Distance Education Librarian, Libraries
- Robert Craig** (1980-2008) Professor, Broadcast and Cinematic Arts, School of
- Yvette B. Crandall** (1967-2010) Professor, Communication and Dramatic Arts
- Mary Ann Krajnik Crawford** (1997-2013) Professor, English
- Harold B. Crawley** (1967-1997) Associate Professor, Teacher Education and Professional Development
- Charles T. Crespy** (2010-2018) Dean, Business Administration, College of
- Linda C. Criswell** (1997-2015) Coordinator/Automation Support, Libraries
- William R. Cron** (1982-2014) Professor, Accounting, School of
- Emma J. Curtiss** (1973-1995) Coordinator, Payroll, Payroll/Travel/FIS
- William O. Dailey** (1988-2020) Professor, Communication
- Janet D'Ambrosio** (1968-1998) Coordinator of Scheduling, Registrar's Office
- James W. Damitio** (1975-2017) Professor, Accounting, School of
- Janet S. Danek** (2010-2020) Coordinator/Exhibits & Projects, Libraries
- Elaine Daniels** (1970-2002) Assistant Professor, Finance & Law
- Jon E. Darrow** (1970-2000) Director, Faculty Personnel Services
- Cynthia Emily Davis** (1985-2021) Lecturer, History, World Languages and Cultures
- Joyce Marie Davis** (1983-2002) Manager, Support Services, Facilities Management
- Mary Jo Davis** (2000-2015) Coordinator/Instructional Materials Center, Instructional Materials Center
- Ian Davison** (2008-2020) Interim Senior Vice Provost/Academic Affairs, Science and Engineering, College of
- Jane M. Davison** (1990-2021) Associate Dean/Science & Engineering, Science and Engineering, College of
- William J. de Kryger** (1972-2009) Professor, Engineering and Technology, School of
- James Ralph Dealing** (1971-2001) Assistant Professor, History
- Robert L. DeBruin** (1971-2003) Vice Provost, Academic Administration
- Thomas J. Delia** (1966-2001) Professor, Chemistry and Biochemistry
- Sharon Lee Deni** (1979-1999) Director, Music Events, Music, School of
- James W. Dening** (1970-1997) Director, Computer Services
- Lawrence A. Dennis** (1969-2000) Manager, Information Technology
- Herbert W. Deromedi** (1967-2006) Director, Athletics
- Burton Dickerson** (1964-1983) Professor, Art and Design
- John S. Dinan** (1976-2012) Professor, English
- Stanley Allen Dinius** (1970-2009) Chief of Police, Police Department
- John Dinse** (1971-2006) Associate Professor, Political Science
- Jesse Dominguez** (1993-2019) Professor, Art and Design
- Lynn Ann Dominguez** (1993-2022) Professor, Recreation, Parks & Leisure Services Adm.
- Claudia B. Douglass** (1976-2018) Vice Provost/Academic Effectiveness, Academic Effectiveness
- Arlene K. Dunham** (1981-2002) Asst. Director, Undergraduate Academic Services, Registrar's Office
- William Dunham** (1969-1991) Assistant Vice President, Personnel/Employee Relations
- Pattie L. DuVall** (1986-2010) Coordinator, Center for Excellence for Education
- Robert J. Ebner** (1976-2015) Director, University Events
- Nancy A. Eddy** (2005-2022) Professor, Theatre and Dance
- Gerald N. Edgar** (1990-2012) Manager/Library Business Services, Libraries
- Karen Lynn Edwards** (1995-2017) Professor, Teacher Education and Professional Development
- Steven L. Egler** (1976-2014) Professor, Music, School of
- Charles F. Eiszler** (1970-2005) Professor, Teacher Education and Professional Development
- Al Ellard** (2001-2018) Professor, Recreation, Parks & Leisure Services Adm.
- Barbara E. Elmore** (1994-2018) Registered Nurse, University Health Services
- Judith S. Emmons** (1984-2005) Assistant Director, Scholarships & Financial Aid
- Nancy Moxon Epstein** (1995-2011) Professor, Physical Therapy Program
- Donna B. Ericksen** (1986-2021) Professor, Mathematics
- Robert Slade Estabrook** (1998-2008) Professor, Educational Leadership
- Jack Evans** (1965-1992) Professor, Teacher Education and Professional Development
- Robert A. Faleer** (1979-2021) Professor, Libraries
- James Robert Falender** (2001-2018) Lecturer, Chemistry and Biochemistry
- Brian W. Fannon** (2007-2014) Trustee, Board of Trustees
- John Vincent Farrar** (2001-2018) Lecturer, Counseling and Special Education
- Christine L. Fauver** (1987-2005) Student Services Coordinator/International Program, Global - On Campus
- Lynn N. Fauver** (1972-2006) Director, Museum of Cultural & Natural History

- Richard D. Featheringham** (1971-2007) Professor, Business Information Systems
- Michael Ross Federspiel** (2000-2019) Lecturer, History
- Daniel F. Ferrer** (1990-2014) Head/Library Systems, Libraries
- John T. Fierst** (2006-2021) Professor, Libraries
- Joseph E. Finck** (1982-2018) Professor, Physics
- Elaine M. First** (1977-2018) Assistant Registrar, Registrar's Office
- Edward J. Fisher** (1977-2000) Professor, Business Information Systems
- John Stephen Fisher** (1975-2015) Associate Vice President, Residences & Auxiliary Services
- Charles John Fitzpatrick** (1989-2010) Director/Small Business Development Center, Isabella Bank Institute for Entrepreneurship
- William R. Fleischmann** (2011-2017) Medical Faculty, Medicine, College of
- Diane Lambart Fleming** (1983-2012) Associate Director/Client Services, Scholarships & Financial Aid
- Richard J. Fleming** (1982-2007) Professor, Mathematics
- Wendy A. Folger** (1988-2012) Professor, Counseling and Special Education
- Sandy L. Folsom** (1984-2019) Professor, Libraries
- Jeffrey Harrington Foote** (1976-2002) Professor, Music, School of
- Rachel Ann Foster-Lifson** (1989-2013) Professor, Psychology
- Patricia Jane Fox** (1984-2014) Coordinator/Center Services, Global - On Campus
- Richard William Fox** (1987-2007) Professor, Counseling and Special Education
- Cristy A. Freese** (1986-2019) Executive Associate AD/Sport Administration, Athletics
- Roger N. Freling** (1967-2000) Assistant Professor, English
- Frank J. Frick** (1957-1988) Administrator, Dining Services
- Peter H. Fries** (1971-2004) Professor, English
- John A. Frisch** (1988-2007) Director, Education Materials Center, Global - On Campus
- Nedra K. Frodge** (1983-2007) Associate Professor, Art and Design
- Bruce E. Frost** (1984-2017) Lecturer, Engineering and Technology, School of
- Robert L. Frost** (1981-2021) Chairperson, Recreation, Parks & Leisure Services Adm.
- Gerald Fuller** (1966-1987) Professor, Psychology
- Pamela Ann Fultz** (1983-2006) Assistant Director/Undergraduate Academic Services, Registrar's Office
- Gary Gagnon** (2000-2020) Assistant Professor, Marketing and Hospitality Services Admin.
- Sue G. Gamble** (1978-2016) Professor, Music, School of
- Cathy J. Ganoe** (1982-2014) Professor, Human Environmental Studies
- Patrick Michael Garrity** (1999-2018) Associate Director/Data Services, Information Technology
- Hill Gates** (1971-1994) Professor, Politics, Society, Justice & Public Service
- Pamela Sue Gates** (1987-2018) Dean, Liberal Arts and Social Sciences, College of
- Michael A. Gealt** (2013-2019) Provost Emeritus, Provost's Office
- Richard A. Gergel** (1976-2010) Professor, Art and Design
- Judy Geroux** (1985-2003) Chief Financial Officer, Michigan Special Olympics
- Michael Bruce Gilbert** (1998-2013) Professor, Educational Leadership
- Rebecca L. Gilbert** (2001-2020) Assistant Manager/Payroll, Payroll/Travel/FIS
- Gordon Harold Gilchrist** (1965-1993) Associate Professor, Engineering and Technology, School of
- David R. Gillingham** (1984-2014) Professor, Music, School of
- James C. Gillingham** (1976-2009) Professor, Biology
- Linda H. Gillingham** (1991-2016) Associate Registrar/Undergrad Academic Services, Registrar's Office
- David D. Ginsburg** (1976-2010) Professor, Libraries
- Ivy Goduka** (1988-2010) Professor, Human Environmental Studies
- Elizabeth A. Goodrich** (1975-1997) Professor, Business Information Systems
- Debra Lyn Goodwin** (1981-2017) Coordinator Contracting & Purchasing, Contracting & Purchasing Services
- Raymond J. Goodwin** (1989-2018) Manager/Student Employment, Human Resources/Staff
- Anita C. Gorham** (1989-2007) Associate Director/Center Professional Excellence, Global - Off Campus
- Duane Patrick Goupell** (1974-2003) Director, Center for Learning Assessment Services
- Janet L. Graham** (1978-2000) Administrative Assistant, Information Technology
- Sidney Graham** (1998-2017) Professor, Mathematics
- Edward B. Grant** (1977-2015) General Manager/Public Broadcasting, Public Broadcasting
- Kimberlee Buckley Grant** (1993-2015) Director/Development/Business Operations, Public Broadcasting
- Pamela Lynn Gray** (1981-2015) Professor, Communication and Dramatic Arts
- Ronald E. Green** (1987-2011) Director/Area Management/MSO, Michigan Special Olympics
- Tammy Jean Griffin** (1989-2021) Manager/Employee Health & Wellness, Human Resources/Staff
- Susan C. Griffith** (2003-2017) Professor, English
- Ronald David Griffiths** (1973-2006) Associate Director, Police Department
- John Grossa** (1966-2001) Professor, Geography & Environmental Studies
- Robert C. Grove** (1968-1993) Assistant Professor, Libraries
- Pamela A. Grudzien** (1985-2017) Director/Acquisitions, Metadata, Res Sharing, Libraries
- David Guenther** (1976-2003) Assistant Professor, Finance & Law
- Sue Guevara** (2007-2019) Head Coach, Women's Basketball, Athletics
- Dale D. Gust** (1970-2008) Professor, Business Information Systems
- Anna Benita Guzdial** (1987-2019) Chief Program Officer/MSO, Michigan Special Olympics
- Darby D. Gwisdala** (1984-2014) Special Assistant to Provost, Provost's Office
- Kathleen Hagen** (1970-1998) Residence Life, Residences & Auxiliary Services
- Helen E. Hagens** (1999-2009) Professor, Human Environmental Studies
- W. Albert Hakala** (1961-1987) Professor, Teacher Education and Professional Development
- Timothy D. Hall** (1993-2016) Associate Dean, Liberal Arts and Social Sciences, College of
- Bee R. Hallett** (1962-1991) Professor, Physical Education & Sport
- Alice Lavonne Hamachek** (1972-1995) Professor, Teacher Education and Professional Development
- Michael J. Hamas** (1976-2010) Professor, Biology
- Arnold Dean Hammel** (1965-2006) Assistant Professor, Mathematics
- Roger L. Hammer** (1987-2022) Professor, Health Sciences, School of
- Richard J. Hardy** (1977-2001) Professor, Health Promotion & Rehabilitation
- Craig L. Harkrader** (1977-2010) Systems Administrator I, Information Technology
- Fred Harris** (2006-2020) Associate Director/CMU Police, Police Department
- Richard Lee Hartley** (1979-2001) Associate Professor, Business Information Systems
- Gerald D. Hartman** (1963-2001) Director, Administrative Applications, Information Technology
- Joan E. Hartman** (1973-1999) Senior Buyer, Contracting & Purchasing Services
- John K. Hartman** (1984-2015) Professor, Journalism
- Timothy S. Hartshorne** (1989-2022) Professor, Psychology
- Janice J. Hartwick-Dressel** (1990-2011) Professor, English
- Jody Lee Hassen** (1998-2020) Executive Director/ESS Operations, Enrollment & Student Services
- Roger D. Hatch** (1976-2013) Professor, Philosophy, Anthropology & Religion
- Amy K. Hauenstein** (2012-2021) Associate Director/Out of State Recruit/Alum Engmt, Admissions

**William R. Haushalter** (1974-1998) Associate Professor, Communication and Dramatic Arts  
**Roger L. Hayen** (1987-2015) Professor, Business Information Systems  
**Gary W. Hayes** (1993-2020) Lecturer, Accounting, School of  
**Randall B. Hayes** (1989-2014) Professor, Accounting, School of  
**Phyllis Annette Heath** (1985-2012) Professor, Human Environmental Studies  
**Richard Hecksel** (1966-1988) Administrator, Scholarships & Financial Aid  
**Dykstra J. Heinze** (1995-2010) Director, Leadership Institute  
**Keith Helferich** (1999-2017) Lecturer, Marketing and Hospitality Services Admin.  
**Janet Helfrich** (1975-2015) Professor, Physical Education & Sport  
**Ruth M. Helwig** (1975-2014) Systems Librarian, Libraries  
**Mary Jean Henley** (1984-2021) Director/Mi Gear-Up/Pathways to Acad Stdt, Institutional Diversity  
**Joyce E. Henricks** (1966-2007) Associate Professor, Philosophy, Anthropology & Religion  
**Nancy J. Herman-Kinney** (1987-2017) Professor, Politics, Society, Justice & Public Service  
**Teresa Hernandez** (2000-2021) Lecturer, Journalism  
**Janet Hethorn** (2015-2020) Dean/Arts & Media, Arts and Media, College of  
**Nancy E. Hicks** (1998-2021) Professor, Business Information Systems  
**Susanne Farnham Hieber** (1979-1999) Coordinator, Student Services, Extended Learning  
**Monte L. Higgins** (1966-2000) Director, CMU Public Television, Public Broadcasting  
**Connie L. Hildebrand** (1996-2008) Off-Campus Librarian, Libraries  
**James L. Hill** (1970-1995) Vice President, Student Affairs  
**James P. Hill** (1980-2016) Professor, Political Science  
**James Richard Hill** (1981-2020) Professor, Economics  
**Frederick Lehman Hinebaugh** (1995-2014) Clinical Supervisor & Coordinator Special Programs, Communication Sciences and Disorders  
**Stanley Hirschi** (1976-2014) Professor, Physics  
**Carolyn Joyce Hoffman** (1980-2001) Associate Professor, Human Environmental Studies  
**Robert E. Hoffman** (1972-1997) Associate Professor, Business Information Systems  
**Donald E. Holland** (1963-1997) Associate Professor, Counseling Center  
**Monica C. Holmes** (1995-2015) Professor, Business Information Systems  
**Shaun Holtgreive** (1982-2022) Interim Associate Vice President/Student Affairs, Student Affairs  
**Wendy S. Honey** (2006-2018) Lecturer, Human Environmental Studies  
**William C. Hood** (1981-2020) Professor, Accounting, School of  
**Neil C. Hopp** (2001-2013) Director, Student Media, Student Publications  
**James E. Hornak** (1966-2009) Chairperson, Physical Education & Sport  
**Joan Hornak** (1978-2008) Professor, Counseling and Special Education  
**Dennis L. Horton** (1968-2010) Professor, Music, School of  
**Nancy Louise House** (1972-2000) Manager, Food Labs, Human Environmental Studies  
**Carole Alice Howard** (1970-1988) Professor, Physical Education & Sport  
**Lou Katherine Howard** (1989-2010) Associate Director, Student Services US, Global - Off Campus  
**Bobby A. Howell** (1976-2018) Professor, Chemistry and Biochemistry  
**James F. Howell** (1971-1998) Associate Professor, English  
**Gongzhu Hu** (1987-2019) Professor, Computer Science  
**Marilyn French Hubbard** (2005-2012) Trustee, Board of Trustees  
**Maria S. Huettig** (1973-2001) Professor, History, World Languages and Cultures  
**Diana Lynn Hughes** (1982-2002) Professor, Communication Sciences and Disorders  
**Dawn Ann Humphrey** (1985-2010) College Liaison, Admissions  
**Thomas M. Hunt** (1972-2003) Director, CMU Public Radio, Public Broadcasting  
**John D. Hurd** (2009-2016) Trustee, Board of Trustees  
**Karen E. Hutslar** (1988-2015) Registrar, Registrar's Office  
**Dennis John Iacco** (1983-2010) Assistant Director/UAS Academic Advising, Registrar's Office

**Yury Ionin** (1989-2007) Professor, Mathematics  
**James R. Irwin** (1989-2020) Professor, Economics  
**Mary Jane Jack** (2002-2013) Director, Clinical Instruction/SP LNG Services, Communication Sciences and Disorders  
**Kelvin Richard Jackson** (1984-2022) Assistant Financial Aid Systems Analyst, Scholarships & Financial Aid  
**Mary Garland Jackson** (1987-2018) Professor, History, World Languages and Cultures  
**Susan Jacob** (1980-2014) Professor, Psychology  
**John Alden Jacobson** (2006-2017) Director/Music Events, Music, School of  
**Richard E. Janis** (1967-2003) Assistant Professor, Art and Design  
**Charles E. Jaquith** (1975-1994) Associate Professor, Teacher Education and Professional Development  
**Dale Jarman** (1974-2014) Manager/CPS and IT Labs, Science and Engineering, College of  
**Ann F. Jay** (1995-2019) Director/Dietetic Internships, Human Environmental Studies  
**Eileen K. Jennings** (1980-2009) General Counsel, General Counsel  
**Brent R. Jensen** (2009-2021) Lecturer, Business Information Systems  
**Stan Wayne Jensen** (2002-2016) Professor, Communication and Dramatic Arts  
**Carl Merle Johnson** (1978-2020) Professor, Psychology  
**Eric A. Johnson** (1976-2020) Professor, History  
**Jane A. Johnson** (1984-2020) Associate Director/Academic Advising, Academic Advising & Assistance  
**Raymond F. Johnson** (1967-2000) Professor, Health Promotion & Rehabilitation  
**Sharon Bradley Johnson** (1976-2015) Professor, Psychology  
**Sterling Johnson** (1988-2022) Professor, Political Science  
**Tom Jones** (1964-1999) Director, Recreation, Parks & Leisure Services Adm.  
**Margo F. Jonker** (1979-2019) Head Coach Softball, Athletics  
**Robert O. Joy** (1987-2000) Professor, Business Information Systems  
**Kenneth Jurkiewicz** (1976-2018) Professor, Broadcast and Cinematic Arts, School of  
**Jerald A. Kabell** (1984-2008) Professor, Computer Science  
**Daniel James Kaczynski** (2008-2018) Professor, Educational Leadership  
**Frederick E. Kaiser** (2002-2019) Associate Director/Business Development, University Communications  
**Nolan Kaiser** (1963-2004) Professor, Philosophy, Anthropology & Religion  
**Christa Kamenetsky** (1963-1997) Professor, English  
**William Ray Kanine** (2011-2018) Trustee, Board of Trustees  
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**Randall G. Kapenga** (1973-2009) Director/Technical Services, Public Broadcasting  
**David James Karmon** (1979-2011) Professor, Accounting, School of  
**Edwin H. Kaufman** (1972-2000) Professor, Mathematics  
**David Barry Keilitz** (1964-1994) Director, Athletics  
**Tricia A. Keith** (2013-2020) Trustee, Board of Trustees  
**James P. Kelsh** (1983-2001) Assistant Professor, Computer Science  
**Maxine K. Kent** (1976-2010) Associate Vice President, Human Resources/Staff  
**Michael A. Kent** (1970-2004) Associate Professor, Psychology  
**Roger L. Kessler** (1991-2006) Trustee, Board of Trustees  
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**Mary S. Kiesgen** (1977-2013) Professor, Music, School of  
**Lynn G. Kindel** (1970-1995) Director, Communications & Public Services, Extended Learning  
**Philip L. Kintzele** (1981-2019) Professor, Accounting, School of  
**Betty A. Kirby** (2004-2020) Dean/Education & Human Services, Education and Human Services, College of  
**Rodney C. Kirk** (1969-2007) Professor, Politics, Society, Justice & Public Service  
**David L. Kizer** (1970-2000) Professor, Physical Education & Sport  
**Barbara Klocko** (2010-2020) Professor, Educational Leadership



- LeRoy R. Klopčic** (1964-1998) Chairperson/Associate Professor, Geography & Environmental Studies
- Alexandra M. Klymyshyn** (1984-2012) Director, Multicultural Education Center
- James A. Knapp** (1985-2009) Head Coach Men's Track, Athletics
- H. Timothy Knickerbocker** (1988-2020) Manager/SAP Systems/CBA, Information Technology
- Susan Marie Knight** (1985-2018) Professor, History, World Languages and Cultures
- Marcella J. Kocar** (1973-1998) Professor, Business Information Systems
- Kathryn E. Koch** (1986-2012) Associate Dean, Education and Human Services, College of
- Lawrence D. Koehler** (1960-1998) Professor, Biology
- Rhonda Kohler** (1985-2018) Director/University Printing Services, Printing Services
- Robert E. Kohrman** (1968-2008) Dean, Science and Engineering, College of
- Kathleen Ann Kolhoff** (1996-2019) Senior Legal Assistant, General Counsel
- Arthur Loren Kontio** (1965-1993) Assistant Professor, Biology
- Peter T. Koper** (1972-2009) Professor, English
- Marie A. Kopin** (1975-2000) Clinical Supervisor, Communication Sciences and Disorders
- Sam R. Kottamasu** (2005-2012) Trustee, Board of Trustees
- David R. Krabill** (1984-2018) Manager/Telecommunications, Information Technology
- Dean Thomas Kreiner** (1970-1997) Professor/Baseball Coach, Physical Education & Sport
- Lois A. Kromer** (1980-2003) Assistant Director, Admissions, Global Engagement
- Thomas P. Kromer** (1969-2011) Professor, Teacher Education and Professional Development
- John N. Krull** (1971-2001) Professor, Biology
- Anil Kumar** (2002-2021) Chairperson, Business Information Systems
- Ray Kytile** (1969-1997) Professor, English
- Gilles R. Labrie** (1970-2007) Professor, History, World Languages and Cultures
- Jean Alice Lambert** (2002-2017) Field Service Manager, Michigan Special Olympics
- Judy Marie Lannen** (1989-2021) Senior Buyer, Contracting & Purchasing Services
- Belinda Jane Laughlin** (1998-2019) Director/Field Service/MSO, Michigan Special Olympics
- Stephen P. Lawrence** (2003-2016) Associate Vice President/Facilities Management, Facilities Management
- Evelyn M. Leasher** (1988-2003) Associate Professor, Libraries
- Penny Stacy Leathley** (1979-2005) Coordinator, Campus ID System, Financial Services & Reporting
- Roger Yim Lee** (1986-2018) Professor, Computer Science
- Ye-Fu K. Lee** (1994-2013) SAP Applications Programmer, Information Technology
- Helen Leemaster** (1968-2005) Assistant Professor, Counseling Center
- Janet D. Lein** (1968-2020) Professor, History, World Languages and Cultures
- Mary Beth Leininger** (2004-2019) Senior Auditor, Internal Audit
- Susan S. Lenker** (1976-2007) Associate Professor, Mathematics
- Terry David Lenker** (1976-2007) Associate Professor, Mathematics
- Herbert Lenon** (1967-1998) Associate Professor, Biology
- Lawrence R. Lepisto** (1977-2015) Professor, Marketing and Hospitality Services Admin.
- Judith F. Lesiak** (1972-2000) Professor, Psychology
- Walter J. Lesiak** (1970-2000) Professor, Psychology
- Maureen Julianne LeVine** (1970-1999) Professor, Psychology
- Glenn S. Lewandos** (1977-2011) Professor, Chemistry and Biochemistry
- Albert L. Lewis** (1976-2004) Professor, Communication and Dramatic Arts
- Barbara Lynne L'Hommedieu** (2005-2019) Director/Student Disability Services, Student Disability Services
- Randi Louis L'Hommedieu** (1999-2019) Chairperson, Music, School of
- Xiaoping Li** (2001-2022) Professor, Teacher Education and Professional Development
- Michael J. Libbee** (1982-2020) Professor, Geography & Environmental Studies
- Terry M. Libkuman** (1970-2007) Professor, Psychology
- En-Bing Lin** (2007-2021) Professor, Mathematics
- Susan Michele Lindahl** (1992-2020) Lecturer, Music, School of
- Barbara Lee Lindley** (1987-2013) Associate Registrar/Undergrad Academic Services, Registrar's Office
- David A. Ling** (1971-2006) Professor, Communication and Dramatic Arts
- Alice Leone Littlefield** (1968-2004) Professor, Politics, Society, Justice & Public Service
- Ernest H. Lloyd** (1967-1998) Professor, Computer Science
- Carolyn Loeb** (1980-2007) Associate Professor, Art and Design
- John V. Logomarsino** (1991-2008) Professor, Human Environmental Studies
- Martha Gay Logsdon** (1971-2009) Professor, Political Science
- Edgar Charles John Long** (1988-2020) Professor, Human Environmental Studies
- John Lopes** (2006-2021) Professor, Physician Assistant Program
- David Anthony Lopez** (1995-2021) Professor, Engineering and Technology, School of
- John P. Lorand** (1971-2001) Professor, Chemistry and Biochemistry
- Peter Vincent Loubert** (1994-2019) Professor, Physical Therapy Program
- Jerald E. Lounsbury** (1968-2003) Associate Professor, Counseling Center
- Robert J. Lovinger** (1967-1998) Professor, Psychology
- William C. Low** (1963-2005) Professor, FaCIT, Information Technology
- Shu Lu** (1991-2013) Financial Aid Systems Analyst, Scholarships & Financial Aid
- Wesley E. Luckhardt** (1985-2015) Professor, Human Environmental Studies
- Diana L. Luehm** (1996-2019) Lecturer, English
- Ronald J. Lutz** (1970-2001) Professor, Engineering and Technology, School of
- Etta M. MacDonagh-Dumler** (1987-2003) Director, Compensation & Benefits, Human Resources/Staff
- David I. MacLeod** (1970-2012) Professor, History
- Elizabeth MacLeod** (1971-2008) Professor, Libraries
- Michael Leonard Magarrey** (2003-2013) Professor, Teacher Education and Professional Development
- Ruth E. Magnell** (-1985) Professor, Philosophy, Anthropology & Religion
- Eileen E. MaloneBeach** (1995-2018) Professor, Human Environmental Studies
- Stanley Mandziuk** (2006-2017) Project Manager/Electrical, Facilities Management
- Robert C. Martin** (2001-2011) Associate Vice Provost, Faculty Personnel Services
- Sue Ann Martin** (1997-2010) Professor, Communication and Dramatic Arts
- Rumie Annette Martinez** (1983-2022) Academic Advisor/CBA, Academic Advising & Assistance
- John Charles Mason** (1982-2017) Head Athletic Trainer, Athletics
- David J. Matty** (1986-2011) Professor, Earth and Atmospheric Sciences, Department of
- Candace E. Maylee** (1983-2019) Assistant Coordinator /Hev Graduate Programs, Human Environmental Studies
- Deborah H. McAlpin** (1999-2020) Academic Advisor/CEHS, Academic Advising & Assistance
- Lauren B. McConnell** (2007-2018) Professor, Communication and Dramatic Arts
- Paula Corrine McDade** (2004-2020) Assistant Director/Faculty Approval Services, Academic Development
- Catherine McDevitt** (1989-2020) Professor, Economics
- David G. McDowell** (1970-2005) Associate Professor, Mathematics
- Gregory D. McGillvary** (1983-2018) Associate Athletic Trainer, Athletics
- Debra A. McGilsky** (1989-2022) Professor, Accounting, School of
- Jacqueline K. McKee** (2000-2014) Academic Advisor, Global - Off Campus



**Athena Helen McLean** (1997-2020) Professor, Politics, Society, Justice & Public Service  
**Susan McLean- McGrath** (1984-2001) Professor, History, World Languages and Cultures  
**Mary C. Mead** (1975-2010) Programmer Analyst, Libraries  
**James Tony Mecoli** (2003-2014) Academic Advisor, Global - Off Campus  
**Guy T. Meiss** (1978-2001) Associate Professor, Journalism  
**Frederic M. Messick** (1967-1997) Professor, Libraries  
**Kim Methner** (1996-2015) Administrative Assistant/Vice President Enrollment, Enrollment & Student Services  
**Anthony M. Miele** (1957-1993) Associate Professor, Physical Education & Sport  
**Harry Mika** (1985-2017) Professor, Politics, Society, Justice & Public Service  
**Thomas James Miles** (1970-2007) Professor, Mathematics  
**William Miles** (1969-1999) Professor, Libraries  
**Charla Dee Miller** (2002-2015) Assistant to Vice President, Advancement  
**Van Miller** (2007-2017) Lecturer, Management  
**Jane Ann Mills** (1988-2020) Director/Global Campus Student Operations, Student Services - MI  
**Robert C. Mills** (1970-2000) Professor, Educational Leadership  
**Mark J. Minelli** (1985-2021) Professor, Health Sciences, School of  
**John B. Mitchell** (1975-2018) Professor, Finance & Law  
**Gisela Moffitt** (1976-2007) Professor, History, World Languages and Cultures  
**Thompson C. Moffitt** (1965-1993) Assistant Professor, Teacher Education and Professional Development  
**Francis J. Molson** (1972-1997) Professor, English  
**Carolyn C. Monahan** (1977-2000) Coordinator, Academic Services, Extended Learning  
**John S. Monahan** (1976-2013) Professor, Psychology  
**James Stewart Monroe** (1975-1997) Professor, Earth and Atmospheric Sciences, Department of  
**Mary J. Montoye** (1978-2021) Executive Director/Research & Grad Studies, Research and Graduate Studies, Office of  
**Colleen Ann Moore** (1988-2012) Professor, Teacher Education and Professional Development  
**Gail A. Moore** (1996-2013) Director of Development, Science and Engineering, College of  
**Thomas J. Moore** (1988-2016) Dean, Libraries  
**Rachael E. Moreno** (1983-1990) Trustee, Board of Trustees  
**Elizabeth Mostrom** (1993-2018) Professor, Physical Therapy Program  
**Hugh Motlagh** (1967-1998) Associate Professor, Teacher Education and Professional Development  
**Mahmoud A. Moursi** (1970-2001) Professor, Management  
**R. Neil Mower** (1985-2017) Professor, Earth and Atmospheric Sciences, Department of  
**Merlyn E. Mowrey** (1988-2018) Professor, Philosophy, Anthropology & Religion  
**Kathleen D. Moxley** (2008-2019) Professor, Teacher Education and Professional Development  
**Sue Chrouch Murphy** (2000-2019) Lecturer, English  
**Gil Richard Musolf** (1994-2018) Professor, Politics, Society, Justice & Public Service  
**Joseph John Myslivec** (1982-2016) Lecturer, Marketing and Hospitality Services Admin.  
**Douglas W. Nance** (1968-2000) Professor, Mathematics  
**Tina Marie Natale** (2003-2014) Academic Advisor for Gear-Up, Institutional Diversity  
**Paul Anthony Natke** (1981-2021) Professor, Economics  
**Donald A. Nellerhoe** (1975-1998) Professor, Business Information Systems  
**Burton D. Nelson** (1966-2006) Associate Professor, Geography & Environmental Studies  
**Judith J. Nemitz** (2002-2018) Program Administrator, Student Services-U.S.  
**Michael A. Nerbonne** (1981-2011) Professor, Communication Sciences and Disorders  
**James H. Neurath** (1984-2018) Lecturer, Accounting, School of

**Robert Newby** (1988-2007) Professor, Politics, Society, Justice & Public Service  
**Jennifer Christina Nims** (2000-2018) Lead Teacher, Human Environmental Studies  
**Mary C. Nimitz** (1976-2000) Regional Manager, Extended Learning  
**Susan Elizabeth Nottingham** (2005-2021) Lecturer, Health Sciences, School of  
**Charles E. Novitski** (1989-2016) Professor, Biology  
**Paul John Oberle** (1965-1993) Professor, Teacher Education and Professional Development  
**Irene O'Boyle** (1993-2015) Professor, Health Sciences, School of  
**Mary C. Obuchowski** (1971-2005) Professor, English  
**Judith E. O'Dell** (1979-2021) Professor, Libraries  
**William Carl Odykirk** (1983-1990) Trustee, Board of Trustees  
**Patrick Okonkwo** (1988-2013) Professor, Marketing and Hospitality Services Admin.  
**Sing-Cheong Ong** (1983-2018) Professor, Mathematics  
**Siu-Wah Ong** (1994-2018) Senior Research Associate, Institutional Research  
**David Anthony Opalewski** (1995-2017) Lecturer, Teacher Education and Professional Development  
**Sarah Rowley Opperman** (2009-2016) Trustee, Board of Trustees  
**Peter B. Orlik** (1969-2017) Chairperson, Broadcast and Cinematic Arts, School of  
**Wayne H. Osborn** (1976-2007) Professor, Physics  
**Michael Allen Owens** (1971-2009) Associate Dean, Dean of Students  
**James A. Pahz** (1977-2010) Professor, Health Sciences, School of  
**Won K. Paik** (1987-2016) Professor, Political Science  
**John A. Palen** (1983-2009) Professor, Journalism  
**Keith A. Palka** (1987-2014) Professor, History, World Languages and Cultures  
**Bruce M.C. Pape** (1968-2004) Assistant Professor, Geography & Environmental Studies  
**Renee Julia Papelian** (2000-2014) Director/Professional Education & Asst. to the Dea, Center for Student Services  
**Paula K. Parise** (1988-2014) Director/Education Materials Center, Global - On Campus  
**Elliott S. Parker** (1976-2007) Professor, Journalism  
**Howard Bruce Parkhurst** (2004-2017) Professor, Teacher Education and Professional Development  
**Twinet Parmer** (1996-2019) Professor, Counseling and Special Education  
**Susan Marie Parsons** (1975-2017) Assistant Dean/Finance/CMED, Medicine, College of  
**Daniel Patterson** (2002-2017) Professor, English  
**Barbara K. Peddie** (1971-2010) Professor, Physical Education & Sport  
**Albert Peng** (1990-2018) Professor, Engineering and Technology, School of  
**Thomas Lee Pennewell** (1969-2002) Associate Professor, Physical Education & Sport  
**Linda C. Perkowski** (2011-2017) Temporary Employee, Medicine, College of  
**John W. Petras** (1966-2001) Professor, Politics, Society, Justice & Public Service  
**John R. Pfeiffer** (1971-2015) Professor, English  
**Frederick M. Phelps** (1970-2012) Professor, Physics  
**Patricia M. Pickler** (1996-2018) Assistant Director/Financial Aid, Scholarships & Financial Aid  
**Nancy Pietraszkiewicz** (1982-2006) Professor, Teacher Education and Professional Development  
**Chuck Pisoni** (1996-2001) Associate Professor, Educational Leadership  
**Pat Plumstead** (1984-2013) Director/Development Information Services, Advancement  
**Patricia Ann Podoll** (1983-2007) Assistant Athletic Director/Academics, Athletics  
**Mark C. Poindexter** (1987-2020) Professor, Broadcast and Cinematic Arts, School of  
**Dennis A. Pompilius** (1970-1997) Coordinator, Instructional Resources, Instructional Materials Center  
**Debra Ann Poole** (1988-2021) Professor, Psychology

- Arlie Joe Pope** (1973-2001) Professor, Health Promotion & Rehabilitation
- Stanley George Pope** (2001-2019) Director/Technology Services/CBA, Information Technology
- Judith E. Powell** (1964-1991) Area Manager, Extended Credit Courses, Extended Learning
- Susan F. Powers** (2009-2022) Manager/Access & User Services, Libraries
- Rose M. Prasad** (1985-2011) Professor, Finance & Law
- Plas A. Presnell** (1984-2014) Director of Operations, Athletics
- Marge L. Preston** (1976-2003) Coordinator, Career Resource Center, Career Services
- Ronald R. Primeau** (1971-2015) Professor, English
- Judith L. Prince** (1997-2012) Director/Graduate Student Services, Graduate Studies, College of
- Dean S. Pybus** (1976-2016) Professor, Recreation, Parks & Leisure Services Adm.
- Alan F. Quick** (1963-1998) Professor, Teacher Education and Professional Development
- Daniel L. Rademacher** (1975-2016) Executive Director/Academic Computing, Information Technology
- Susan M. Rademacher** (1978-2008) Student Ombudsman/President's Office Assistant, President's Office
- Benjamin Ramirez** (1998-2014) Professor, History
- Doris J. Ramsey** (1967-2012) Costume & Makeup Design, Communication and Dramatic Arts
- Brenda F. Randall** (1995-2011) Coordinator/Governmental Relations, Government and External Relations
- Patricia Ranft** (1985-2002) Professor, History
- Ross J. Rapaport** (1983-2020) Professor, Counseling Center
- Norman Rasulis** (1967-1997) Associate Professor, English
- Ann Elizabeth Ratcliff** (1993-2016) Professor, Communication Sciences and Disorders
- Ishwar Rattan** (1984-2021) Professor, Computer Science
- Teri Lee Rau** (1987-2014) Administrative Assistant/Business & Finance, Finance & Administrative Services
- Gary L. Rayburn** (1983-2002) Director, Business Operations, Extended Learning
- Ronald N. Read** (1994-2006) Manager/Southeast Region, Michigan Special Olympics
- William W. Reader** (1976-2013) Professor, Philosophy, Anthropology & Religion
- Lois Redmond** (1970-1992) Professor, Teacher Education and Professional Development
- Roger E. Rehm** (1975-2020) Vice President/Information Technology/CIO, Information Technology
- Steven Alan Rellinger** (2005-2015) Director/Veterans Resource Center, Global - On Campus
- Melvyn Douglas Remus** (1984-2003) Director, Plant Engineering & Planning, Facilities Management
- Mary Ann Renz** (1990-2013) Professor, Communication and Dramatic Arts
- Larry Thomas Reynolds** (1971-1998) Professor, Politics, Society, Justice & Public Service
- Frank Rice** (1977-2014) SAP Applications Programmer, Information Technology
- Kay A. Rice** (1981-2022) Assistant Registrar, Registrar's Office
- Carole A. Richardson** (1985-2010) Director/Special Projects, Academic Affairs
- Norma H. Richardson** (1966-2020) Professor, History, World Languages and Cultures
- Allan Randall Riggs** (1994-2015) Physician Assistant, University Health Services
- Delbert J. Ringquist** (1971-2015) Professor, Political Science
- Joseph D. Rivard** (1990-2016) Professor, Teacher Education and Professional Development
- Edward A. Roberts** (1971-2001) Professor, History, World Languages and Cultures
- John F. Robertson** (1982-2018) Professor, History
- Dolores T. Robinson** (1970-1995) Professor, Counseling and Special Education
- Lori Sue Rogers** (1995-2021) Associate Director/Writing Center, English
- Thomas K. Rohrer** (2002-2019) Director/Gliss, Liberal Arts and Social Sciences, College of
- Maureen Ruth Rondy** (1973-2003) Academic Advisor, Academic Advising & Assistance
- Dorene L. Root** (1978-2016) Associate Registrar/Registration & Records, Registrar's Office
- Robert L. Root** (1998-2004) Professor, English
- Bruce Roscoe** (1980-2013) Professor, Human Environmental Studies
- Lee Rose** (1988-2016) Professor, Teacher Education and Professional Development
- Sally N. Rose** (1983-2016) Professor, Art and Design
- Katherine Brown Rosier** (2001-2022) Professor, Politics, Society, Justice & Public Service
- George E. Ross** (2010-2019) President, President's Office
- Shawna Kay Ross** (2000-2019) Director/Mary Ellen Brandell Volunteer Center, Mary Ellen Brandell Volunteer Center
- Cynthia A. Rubingh** (1978-2015) Director/Student Acct Services & Univ Billing, Student Account Services and University Billing
- Sharon L. Russell** (1989-2015) Commencement Coordinator, President's Office
- David Eugene Rutherford** (1991-2014) Professor, History
- Robin Melvin Sabo** (2006-2018) Professor, Libraries
- Joyce A. Salisbury** (1982-2012) Coordinator/Reference Operations, Libraries
- William Saltarelli** (1989-2021) Professor, Health Sciences, School of
- Robert A. Sander** (1967-2000) Professor, Geography & Environmental Studies
- Pamela A. Sarigiani** (1994-2021) Professor, Human Environmental Studies
- Rosemary C. Saunders** (1987-1994) Registered Nurse, University Health Services
- Katherine A. Schafer** (1986-2005) Assistant to the Dean, Business Administration, College of
- John Iver Scheide** (1988-2021) Professor, Biology
- Stephen P. Scherer** (1969-2015) Professor, History
- Mary Lou Schilling** (1978-2019) Professor, Recreation, Parks & Leisure Services Adm.
- John M. Schleede** (1979-2005) Professor, Marketing and Hospitality Services Admin.
- Linda Schleede** (1992-2005) Assistant Director, Registrar's Office
- Joanie Marie Schmidt** (1977-2015) Director/Residence Life, Residence Life
- James Andrew Schmiechen** (1979-2008) Professor, History
- Daniel L. Schneid** (1978-2004) Associate Professor, Finance & Law
- Walter Raymond Schneider** (1969-1999) Professor, Physical Education & Sport
- Richard A. Schudiske** (1978-2013) Assistant General Manager/Director of Television, Public Broadcasting
- Thomas E. Schultz** (1995-2022) Lab Manager/Biosafety Officer/Biology, Biology
- Cynthia Marie Schumacher** (1989-2018) Executive Director/Charter Schools, Center for Charter Schools, Gov. John Engler
- James P. Scott** (1988-2019) Professor, Business Information Systems
- Gail Patricia Scukanec** (1989-2007) Associate Dean, Graduate Studies, College of
- Sandra Cecelia Seaton** (1990-2004) Professor, English
- Paul F. Seestedt** (1978-2006) Assistant Athletic Director/Director of IAC, Athletics
- Richard D. Seiter** (1970-2004) Professor, English
- Ron Sendre** (1976-2001) Associate Professor, Physical Education & Sport
- Barbara Jean Senesac** (1971-2017) Professor, Teacher Education and Professional Development
- Richard H. Senter** (1976-2006) Professor, Politics, Society, Justice & Public Service
- Vicente Serra** (1978-1998) Associate Professor, History, World Languages and Cultures
- Syed Shahabuddin** (1980-2016) Professor, Management

**Gary Shapiro** (1978-2018) Professor, Politics, Society, Justice & Public Service  
**Sharon A. Shaw** (1971-2003) Office Manager, Parking Services, Public Safety  
**John W. Sheffler** (1977-2015) Director/Radio, Public Broadcasting  
**Julia B. Sherlock** (1993-2021) Director/Career Development Center, Career Services  
**Charles R. Sherwood** (1962-2001) Associate Professor, Physical Education & Sport  
**David B. Shirley** (1970-2012) Professor, Libraries  
**Kaye Lynn Shirley** (1998-2017) Academic Advisor, Academic Advising & Assistance  
**Ronald D. Shoemaker** (1971-2013) Database Administrator, Information Technology  
**Mohan Shrikhande** (1981-2018) Professor, Mathematics  
**Neelima M. Shrikhande** (1981-2015) Professor, Computer Science  
**Andrzej J. Sieradzan** (1983-2015) Professor, Physics  
**Gary L. Silker** (1988-2013) Professor, Counseling Center  
**Lal Pratap Saran Singh** (1983-2017) Professor, Computer Science  
**Grant G. Skomski** (1981-2020) Assistant Director/Residence Life, Residence Life  
**Linda Marie Slater** (2004-2020) Director/Plant Engineering & Planning, Facilities Management  
**Kevin Joseph Smart** (2001-2021) Director/Employee Relations, Human Resources/Staff  
**B. R. Smith** (1986-2007) Professor, Broadcast and Cinematic Arts, School of  
**Martha L. Smith** (1962-1994) Professor, Teacher Education and Professional Development  
**Melissa C. Smith** (2003-2022) Academic Advisor, Academic Advising & Assistance  
**Scott J. Smith** (2003-2014) Chairperson, Physical Education & Sport  
**Steven Frederick Smith** (1997-2016) Director/Public Relations & Internal Comm, University Communications  
**Susan Kay Smith** (1978-2000) Director, MSA Program  
**W. Sidney Smith** (1991-2001) Trustee, Board of Trustees  
**Jerry G. Smoke** (1976-2004) Professor, Art and Design  
**Kimberly Sue Speet** (2003-2017) Manager/Parking Services, Police Department  
**David Spitler** (1977-2000) Assistant Professor, Engineering and Technology, School of  
**David Allan Sprague** (1990-2006) Professor, Management  
**Richard J. St. Andre** (1971-2008) Interim Dean, Science and Engineering, College of  
**Dennis St. John** (1993-2021) Professor, Mathematics  
**Donald R. Stabenow** (1973-2006) Associate Director/University Recreation, University Recreation  
**Frederick W. Stabley** (1982-2005) Director, Sports Information, University Communications  
**Linda Seestedt Stanford** (1975-2007) Assistant Dean, The Herbert H. and Grace A. Dow College of Health Professions  
**Gilbert D. Starks** (1975-2006) Associate Professor, Biology  
**Mary Kay Starnes** (1979-2018) Associate Director/Academic & Professional Prgrms, Academic Development  
**Robert A. Stecker** (1983-2021) Professor, Philosophy, Anthropology & Religion  
**Daniel L. Steele** (1983-2019) Professor, Music, School of  
**Susan B. Steffel** (1991-2011) Professor, English  
**Blaine W. Stevenson** (1970-2012) Professor, Politics, Society, Justice & Public Service  
**Sharon L. Stevenson** (1978-2008) Professor, English  
**Michael Stewart** (1988-2019) Professor, Communication Sciences and Disorders  
**Thomas Warner Stewart** (1994-2018) Lecturer, Political Science  
**Neil Story** (1972-1998) Associate Professor, Management & Law  
**R. Gene Stout** (1981-2010) Professor, Finance & Law  
**Michael C. Stratford** (1968-1998) Associate Professor, Political Science  
**Jerry S. Strouse** (1970-2006) Professor, Human Environmental Studies

**James John Student** (2003-2022) Director/Elemental & Isotopic Analysis Lab, Science and Engineering, College of  
**Richard K. Studley** (2015-2022) Trustee, Board of Trustees  
**John W. Swanstrom** (1968-2000) Professor, Art and Design  
**Bradford L. Swartz** (1980-2016) Chairperson, Communication Sciences and Disorders  
**Lawrence Sych** (1993-2021) Professor, Political Science  
**Rick Sykes** (1996-2020) Professor, Broadcast and Cinematic Arts, School of  
**Bonnie Lou Szollosi** (1987-2011) Coordinator, Payable Accounting  
**Jill Taft-Kaufman** (1979-2018) Professor, Communication and Dramatic Arts  
**Renny H. Tatchell** (1985-2011) Professor, Communication Sciences and Disorders  
**Barbara S. Taylor** (1976-2007) Director, Faculty Personnel Services  
**Marguerite Mary Terrill** (1997-2017) Professor, Teacher Education and Professional Development  
**Dennis J. Thavenet** (1967-1997) Professor, History  
**Herman A. Theeke** (1989-2014) Professor, Management  
**Diane K. Thomas** (1977-2017) Manager/Access Services, Libraries  
**Marsha Pazdziorko Thomas** (2002-2012) Program Administrator, Global - Off Campus  
**Stacy W. Thompson** (1964-2002) Professor, English  
**Stephen M. Thompson** (1973-2015) Professor, Physical Education & Sport  
**Ronald J. Thomson** (1991-2009) Systems Programmer II, Pearce Computer Center  
**Annette Thornton** (2008-2021) Professor, Theatre and Dance  
**Larry L. Tifft** (1976-2012) Professor, Politics, Society, Justice & Public Service  
**Ted Tolcher** (1999-2021) Senior Director of Gift Planning, Advancement  
**Alice Tombouliau** (1981-1989) Trustee, Board of Trustees  
**Erika Topinka** (1969-1989) Unit Manager, Dining Services  
**Eric Torgersen** (1970-2008) Professor, English  
**Calvin D. Tormanen** (1981-2012) Professor, Chemistry and Biochemistry  
**Herman Lee Triezenberg** (1992-2014) Chairperson, Physical Therapy Program  
**Janice A. Trionfi** (1973-2016) Dir/Risk Mgmt, Environmental, Health & Safety, Risk Management, Environmental Health & Safety  
**Thomas P. Trionfi** (1977-2017) Director of Contracting, Purchasing & Services, Contracting & Purchasing Services  
**James A. Tryon** (1979-1998) Chief Project Manager, Facilities Management  
**Roy R. Tubbs** (1969-1999) Programmer/Analyst, Information Technology  
**Michael J. Turner** (1967-1998) Manager, Bookstore  
**Theresa T. Turner** (1979-2003) Chief Medical Technician, University Health Services  
**James B. Twesten** (1983-2013) Manager/Technical Services, Global - Off Campus  
**Helene Tyson** (2000-2019) Program Administrator, Student Services-U.S.  
**Kathleen M. Utecht** (1977-2006) Professor, Management  
**Douglas A. Valek** (1971-2006) Associate Professor, Biology  
**Cheryl Lynn Vallance** (1978-2008) Coordinator/UG TScript Credit Eval, Registrar's Office  
**K. Roger VanHorn** (1971-2022) Professor, Psychology  
**Neil L. VanSyckle** (1971-1991) Manager, Retirement & Workmens Comp, Human Resources/Staff  
**Daniel Vetter** (1988-2017) Senior Associate Dean/Business Administration, Business Administration, College of  
**Andrew E. Virkler** (2011-2021) Project Manager, Facilities Management  
**Paul S. Visich** (1994-2011) Professor, Health Sciences, School of  
**Janis M. Voegel** (1976-2002) Professor, Human Environmental Studies  
**Kimberly Jeanne Voisin** (1998-2022) Assistant Director/Residence Life, Residence Life  
**Tony Voisin** (1985-2021) Associate Vice President/Student Affairs, Student Affairs  
**Charles B. Vonder Embse** (1987-2012) Professor, Mathematics

- Martin J. VonDoloski** (1989-2011) Manager/Cable TV, Information Technology
- Michael W. Vuillemot** (1999-2018) Lecturer, Isabella Bank Institute for Entrepreneurship
- Janet Wagester** (1974-2001) Executive Assistant to the President, President's Office
- Jerrie Waggoner** (1966-1983) Administrator, Scholarships & Financial Aid
- Edward J. Walsh** (1975-1997) Assistant Professor, Libraries
- Katherine L. Walsh** (1976-2000) Assistant Professor, Teacher Education and Professional Development
- Sydney C. Walston** (1971-2001) Professor, Health Promotion & Rehabilitation
- Lori Ann Wangberg** (2001-2021) Health Educator, University Health Services
- Robert F. Wardrop** (2010-2022) Trustee, Board of Trustees
- Margaret E. Ware** (1999-2015) Professor, Art and Design
- John P. Warriner** (1967-2001) Associate Professor, Chemistry and Biochemistry
- Susan Ellen Watt-Smith** (2002-2022) Senior Buyer, Contracting & Purchasing Services
- William Thomas Weaver** (1988-2012) Coordinator/Prevention & Rehabilitation, Human Resources/Staff
- Alan M. Weber** (1975-2009) Professor, Teacher Education and Professional Development
- Denise L. Webster** (1985-2020) Professor, The Herbert H. and Grace A. Dow College of Health Professions
- William H. Weideman** (2013-2020) Trustee, Board of Trustees
- Robert S. Welsh** (1972-2006) Professor, Marketing and Hospitality Services Admin.
- T. Edward Westen** (1975-1998) Professor, Political Science
- Marcy Weston** (1972-2015) Executive Associate Athletic Director/Sports Admin, Athletics
- David Ernest Whale** (1997-2020) Associate Professor, Educational Leadership
- Cynthia A. Whitaker** (1990-2010) Coordinator/Instructional Materials Center, Instructional Materials Center
- Nancy Jean White** (2000-2022) Professor, Finance & Law
- David L. Whitney** (1988-2000) Professor, Marketing and Hospitality Services Admin.
- Linda C. Wicander** (1999-2011) Director/Student Services, Business Administration, College of
- Reed Wicander** (1976-2015) Professor, Earth and Atmospheric Sciences, Department of
- Al Wildey** (2003-2021) Professor, Art and Design
- Barrie Joed Wilkes** (1992-2021) Vice President/Finance & Administrative Services, Finance & Administrative Services
- Heidimarie E. Wilkins** (2009-2022) Lecturer, Teacher Education and Professional Development
- Ronald Lee Williams** (1971-2002) Director, CMU Police, Public Safety
- John E. Williamson** (1979-2018) Professor, Music, School of
- Julie L. Wilson** (1995-2022) Associate Director/Client Services, Scholarships & Financial Aid
- Beatrice Windgaston** (1978-2003) Coordinator, Administrative Services, Residence Life
- Edith B. Wirtshafter** (1986-2014) Director/Field Services, Michigan Special Olympics
- Carol Lee Wojcik** (1989-2005) Director, Student Disability Services
- James J. Wojcik** (1966-2001) Director, Student Publications
- Lorna I. Wonsey** (1979-2000) Office Manager, Central Mailroom
- Suzanne Sobaski Woods** (1985-2018) Professor, Communication Sciences and Disorders
- John Prentice Wright** (1997-2015) Professor, Philosophy, Anthropology & Religion
- Daniel Everet Wujek** (1968-2004) Professor, Biology
- John Yantis** (1968-1997) Professor, Educational Leadership
- Mary Lu Yardley** (1975-2010) Executive Director/Alumni Relations, Alumni Relations
- William Ernest Yeagley** (2009-2019) Chief of Police/CMU, Police Department
- Janet Yerby** (1980-2002) Professor, Communication and Dramatic Arts
- Michael D. York** (1988-2017) SAP Applications Programmer, Information Technology
- Straum Erik Yorton** (1993-2020) Coordinator/Prevention & Rehabilitation, Human Resources/Staff
- Juan P. Zamudio** (1978-2013) Assistant Director/UAS Academic Advising, Registrar's Office
- Linda Zedan** (1985-2017) Program Administrator, Student Services-U.S.
- Basil Zimmer** (1969-2009) Assistant Professor, Economics
- J. Timothy Zipple** (1999-2021) Professor, Physical Therapy Program
- Habib A. Zuberi** (1971-2000) Professor, Economics



# » Code of Student Rights, Responsibilities and Disciplinary Procedures

This publication presents the Code of Student Rights, Responsibilities and Disciplinary Procedures at Central Michigan University. It establishes the procedures followed and outlines the possible consequences for students found in violation of the "Code of Conduct." The disciplinary procedures outlined in this document do not replace or substitute for filing charges through law enforcement agencies if it is determined that such action is appropriate.

This document originally was formally adopted by the Board of Trustees for Central Michigan University on December 16, 1972. Since that time, it has been periodically reviewed and revised as needs changed. This revision was approved by the President and the Board of Trustees on June 24, 2014 and amended by the President on December 12, 2014 and March 16, 2015.

The President is responsible for promulgating rules and regulations pertaining to student rights and responsibilities, including regulations governing student organizations, in keeping with the policies and goals established by the Board of Trustees. In fulfilling this responsibility, the President is obligated to assure the right of due process for students.

The President has designated the Associate Vice President for Student Affairs as the person charged with the administration of student discipline. The Associate Vice President for Student Affairs appoints Conduct Proceedings Officers to answer questions concerning the rights and responsibilities of students, to receive complaints as they are reported, and to follow through with discipline cases to their resolution.

Student Affairs Office  
March 16, 2015

## 1. Preamble

The students, faculty, and staff of Central Michigan University constitute an academic community that is committed to the preservation, communication, and discovery of knowledge, and to the active pursuit of truth. Consistent with this purpose, the university recognizes its obligation to afford each student the opportunity to develop the student's educational potential while retaining free exercise of rights and freedoms as a citizen. Such opportunity should be limited only by the necessity of insuring equality of opportunity to all students, and by the corollary requirement of orderly operation of the educational processes. Each member of the Central Michigan University community assumes an obligation regarding self-conduct to act in a manner consistent with a respect for the rights of others and with the university's function as an educational institution. As guides for individual and group actions within this community, the university affirms the following general principles of conduct. These principles serve as the basis for regulations concerning student conduct.

**1.1** The community requires a system of order supportive of the educational process that is the purpose of the university. Primary responsibility for preserving the system of order rests upon the individuals making up the community. Each individual must accept responsibility for their own actions and values and for recognizing that such actions and values affect the whole community. Implicit in the community's recognition of the rights of the individual is an obligation on the part of the individual to accept responsibilities toward the community.

**1.2** Even though there is a diversity of opinion regarding many ethical and moral standards, each person should endeavor to maintain self conduct in a manner consistent with respect for others and thoughtful consideration for the needs of society. In social relationships generally, including relations involving the civil, property, and personal rights of others, each individual has an obligation to act in a manner consistent with these fundamental values.

**1.3** The educational function depends upon honesty, integrity, and respect for truth. Any action not consistent with these principles is unacceptable.

**1.4** As part of the democratic tradition, members of the community should be free to study and act upon social issues, including issues affecting the university. Each person ought to learn and practice the art of thoughtfully examining controversial issues, expressing views individually and as a group member responsibly, and in a manner that is consistent with the educational purpose of the university.

**1.5** The university community recognizes the need for the development of personal ethics and philosophies. The members of this community should be committed to broad personal growth and development in society, realizing that each individual has both the freedom and obligation to make ethical choices and to accept the attendant responsibilities.

## 2. Student Rights

Free inquiry and free expression are essential attributes of a community of scholars. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus generally, and in the community at large. The responsibility to secure and respect general conditions conducive to the freedom to learn is shared by all members of the university community. Students should strive to develop the capacity for critical judgment and the ability to engage in a sustained and independent search for truth, while endeavoring to exercise their freedom with maturity and responsibility. As students undertake to fulfill the obligations and duties outlined in this document, the university community of which they are a part undertakes to respect the basic freedoms of students.

## 2.1 Rights of Students

In recognition of students' rights and dignity as members of the university community, Central Michigan University is committed to supporting the following principles and to protecting those rights guaranteed by the Constitution, the laws of the United States and the State of Michigan, local ordinances, and the policies adopted by the Board of Trustees.

**2.1.1** Students have the right to free inquiry, expression and association.

**2.1.2** Students have the right to editorial freedom in student publications and other student media, e.g. CM Life, WMHW, and MHTV.

**2.1.3** Students have the right to representation on the appropriate, designated bodies.

**2.1.4** Students accused of misconduct or of violating university policy have the right to have a determination of their violation or non-violation in accordance with university procedures.

**2.1.5** Students have the right to protection against improper disclosure of their student records.

**2.1.6** Students have the right of access to their personal educational records.

**2.1.7** Students have the right to access all policies, rules and decisions concerning their continued enrollment, and to the required course materials and facilities necessary to pursue their studies.

**2.1.8** Students have the right to educational programs that meet the objectives of the master syllabus, to teaching consistent with those objectives, and to a learning environment that encourages the students' engagement with their education.

**2.1.9** Students have the right to be informed by the faculty near the beginning of each course about course requirements, evaluation procedures, and evaluation criteria to be used, and the right to expect that those criteria be employed. Faculty members have the authority to change a course syllabus after the beginning of the semester and are expected to inform students of these changes in a timely manner.

**2.1.10** Students have the right to take reasoned exception to the data or views offered in any course of study; they are, however, responsible for learning the content of any course of study for which they are enrolled.

**2.1.11** Students have the right to be evaluated solely on relevant academic criteria and to have protection against arbitrary or capricious academic evaluation as described in the "Grade Grievance Policy" in the University *Bulletin*.

**2.1.12** Students have the right to request and receive timely assessment of their academic work by the instructor, or in the case of graduate students by their thesis/dissertation/Plan B committee chairperson and committee members.

**2.1.13** Students have the right to request and receive a reasonable and timely review of their grades by the instructor.

**2.1.14** Students have the right of complaint about academic matters if they believe their rights have been violated. When not covered by another policy, a complaint is properly filed by presenting the issue first to the faculty member or thesis, doctoral research project or dissertation committee chairperson. If not resolved, the student may take the issue to the department chairperson. If not resolved at this level, the student may take the complaint to the office of the dean of the academic college or the Director of Graduate Studies.

## 2.2 Relationships with the University

**2.2.1** As citizens, students have the same duties and obligations as do other citizens and enjoy the same freedoms of speech, press, religion, peaceful assembly, and petition that other citizens enjoy. In all of its dealings with students, the university will respect the rights guaranteed to them by the Constitutions and laws of the United States, the State of Michigan, and local ordinances.

**2.2.2** All registered student organizations are open to all students without respect to race, religion, creed, sexual orientation, gender, disability, or national origin except that certain organizations (e.g. social fraternities and sororities) are restricted as to gender, as allowed under Title IX of the Education Amendments of 1972.

**2.2.3** Students individually and collectively are free to examine and to discuss all questions of interest to them, including questions relating to university policies, and to express opinions publicly and privately. They are free to support causes by any orderly means that do not disrupt the operation of the university.

## 2.3 Responsibilities of Students and Faculty

Students should conscientiously strive to complete course requirements as stated, and accept responsibility to contribute positively to the learning environment established by faculty. Proper evaluation of students in a course is based solely on performance in meeting appropriate standards established and communicated by the instructor for that course. Each course has a master syllabus approved through university curricular processes, which includes a description of the scope of the course and a list of the goals and objectives of the learning experience. Faculty members assigned to teach a course develop a course outline, based on the master syllabus, to provide students with greater specificity about how the course will be conducted in order to accomplish the intended goals and objectives. Proper evaluation of progress of graduate students in thesis or dissertation work or other research projects is based on attainment of objectives established by the chair of the student's committee according to written departmental guidelines.

## 2.4 Relationships with Law Enforcement Agencies

In addition to filing complaints under these regulations, victims are encouraged to report crimes to the appropriate law enforcement agency. The CMU Police Department is the designated law enforcement agency for crimes committed on campus. As members of the local community, students are expected to cooperate with all law enforcement agencies.

## 2.5 Confidentiality of Information

All information about students' views, beliefs, and political associations that members of the university acquire in the course of their work as teachers, administrators, advisers, and counselors is confidential. Improper disclosure of confidential information is a serious violation of the obligations of a member of this university community. Judgments of a student's ability and character, however, may be provided under appropriate circumstances.

## 2.6 Student Associations

Students are free to form and join associations that advance the common interest of their members. Activities of such organizations must be conducted in accordance with university regulations and public law.

## 3. Responsibilities of Students

### 3.1 General Regulations Concerning Student Conduct

**3.1.1** The Board of Trustees is responsible for promulgating policies regarding student conduct at Central Michigan University. The President, as its executive officer, is the final authority in all discipline cases. The Vice President for Enrollment and Student Services is the designated officer responsible to the president for conducting discretionary review of a decision of the Appeals Board to suspend a student for more than one week or to dismiss a student. The Associate Vice President for Student Affairs is the designated officer responsible to the President for the administration of student conduct policies. All misconduct of students is reported to the Associate Vice President for Student Affairs or to the persons designated by the AVP for Student Affairs to receive such reports.

(continued)

**3.1.2** This Code applies to student conduct that occurs either on or off campus, especially when such conduct affects the interests of the university. The university shall take disciplinary action in cases concerning a student's actions or offenses occurring within or affecting people on property within the physical boundaries of Central Michigan University, on or affecting university owned or controlled property, or when the student is in attendance at a university sponsored event, or when the interests of the university as a community are clearly involved. A student committing a criminal offense, whether that offense occurs on or off campus, that is also a violation of the Code of Student Rights, Responsibilities and Disciplinary Procedures, may be subject to University discipline. In other cases, where the health and safety of members of this community are clearly involved, the university shall assert its authority.

Students subject to the provisions of this Code are defined as all persons who have enrolled at the university, either full-time or part-time, pursuing undergraduate, graduate, or non-degree studies. Persons who have been enrolled at the university, and who have not withdrawn, are students even when they are not enrolled for a particular term. Students also include persons who have been admitted to the university and who, before their first attendance, participate in activities intended only for prospective students (e.g., orientation, leadership, band, or other camp, athletic training and practices).

## **3.2 Specific Regulations Concerning Student Conduct**

**3.2.1 Academic Dishonesty.** Written or other work that a student submits in a course shall be the product of that student's own efforts. Plagiarism, cheating, and all other forms of academic dishonesty are prohibited. Students are expected to adhere to the ethical and professional standards associated with their programs and academic courses. Alleged violations of this section shall be adjudicated in accordance with CMU's Policy on Academic Integrity. Copies of the Policy on Academic Integrity may be accessed via the Office of Student Conduct website (<https://www.cmich.edu/ess/studentaffairs/StudentConductOffice/Pages/default.aspx>).

**3.2.2 False Information.** A student shall not furnish, or attempt to furnish, false or misleading information to university officials or on official university records. Furthermore, a student shall not forge, alter, or misuse the university name, the name of any university employee, documents, records of identification, or attempt to do the same.

**3.2.3 Disruption of Learning.** A student shall not obstruct, disrupt or interfere, or attempt to obstruct, disrupt or interfere with another student's right to study, learn or complete academic requirements. This includes acts to destroy or prevent or limit access to information or records used by other students in connection with their university responsibilities.

**3.2.4 Disruptive Behavior During Class.** A student shall not obstruct, disrupt or interfere, or attempt to obstruct or interfere with another student's right to study, learn, participate, or a teacher's right to teach during a class. Whether in the classroom or online, this includes but is not limited to such behaviors as talking at inappropriate times, drawing unwarranted attention to oneself, engaging in loud or distracting behaviors, or refusing to leave a classroom when ordered to do so.

**3.2.5 Disruption of University Authorized and Scheduled Events.** A student, group of students, or registered student organization shall not obstruct or disrupt, or attempt to obstruct or disrupt, teaching, research, administration, disciplinary procedures, or other university activities. This includes, but is not limited to: acts to destroy or prevent or limit access to information or records used by other students in connection with their university responsibilities or impeding classes, the carrying forward of the university's business, or the arrangements for properly authorized and scheduled events. A person attempts to disrupt when, with the intent to disrupt, that person does any act that constitutes a material step toward disruption.

**3.2.6 Access to Facilities.** A student shall not enter, or attempt to enter, closed university facilities or facilities clearly under the authorized control of another individual, e.g., student vehicles, rooms or apartments; disrupt or attempt to disrupt, the scheduled use of university facilities; block, or attempt to block, access to or from university facilities; or remain within, or attempt to remain within, university facilities after their closing unless authorized to do so by the President, or the President's designated representative, or the student authorized to and in control of said facility or facilities.

**3.2.7 Threat/Endangerment/Assault.** A student shall take no action that threatens or endangers the safety, health, or life, or impairs the freedom of any person, nor shall a student make any verbal threat of such action. This includes actions commonly understood to constitute assault or battery.

**3.2.7.1 Sexual Assault.** A student shall adhere to the university's Sexual Misconduct Policy (#3-39) and the policies contained therein. Copies of the Policy on Sexual Misconduct may be accessed via the Office of Student Conduct website (<https://www.cmich.edu/ess/studentaffairs/StudentConductOffice/Pages/default.aspx>).

**3.2.8 Disruptive Self-Injurious Behavior.** A student shall not engage or threaten to engage in self-injurious behavior that negatively impacts or is disruptive to the learning/living environment of others.

**3.2.9 Property Damage.** A student shall take no action that damages or tends to damage property not the student's own.

**3.2.10 Theft.** A student shall not appropriate for the student's own use, sale, or other disposition, property not the student's own without consent of the owner or the person legally responsible for it. This includes embezzlement, misappropriation and/or theft of university and/or student organizational resources and theft of personal information.

**3.2.11 Disorderly Conduct.** A student shall not act as a disorderly person or engage in disorderly conduct or disturb the peace, as defined by state statute or local ordinance. This includes acts of indecent exposure or lewd conduct.

**3.2.12 Controlled Substances.** A student shall not possess, use, manufacture, produce, or distribute, or aid in the use, manufacture, production, or distribution of, any controlled substance except as expressly permitted by law and university policy. Violation of the Residence Life Alcohol and Controlled Substances Policy is a violation of this section. Controlled substances are defined in the Controlled Substances Act of 1971, as amended.

The use or abuse of prescription drugs or over-the-counter substances, such as inhalants or herbals, in any way other than the intended or appropriate use, may be interpreted as a violation under this policy.

**3.2.13 Violation of Alcohol Policy.** A student shall not possess, consume or furnish, or aid in the consumption or furnishing of, alcoholic beverages except as permitted by law and university policy. Violation of the Residence Life Alcohol & Controlled Substances Policy is a violation of this section.

**3.2.14 Firearms/Explosives/Weapons.** A student shall not possess or use firearms; explosives (including, but not limited to, fireworks and black powder); dangerous chemicals; weapons; knives with a blade longer than three inches, hunting knives, fixed blade knives, switchblade knives, throwing knives, daggers, razors, other cutting instruments the blade of which is exposed; or items that forcibly eject projectiles (including BB, CO2-powered, pellet and air soft guns); and any other device that may be injurious to others, except as part of an approved university activity and under the supervision of a university official. Firearms (including BB, CO2-powered, pellet and air soft guns) may not be stored in university residences. Any replica of any of the foregoing weapons is also prohibited. Firearms used for hunting must be properly registered with the CMU Police Department and stored in compliance with university regulations.



The State of Michigan has enacted a concealed carry law that prohibits carrying a concealed pistol into a dormitory (residence hall) or classroom of a university.

**3.2.15 Complying with University Agents.** A student shall comply with the directions of university agents acting in the performance of their regular or delegated duties and must identify him self or her self to these agents upon request.

**3.2.16 Payment of Fines/Restitution.** A student shall pay fines or restitution levied by a proper hearing body or university authority by the deadline established.

**3.2.17 Misuse of Buildings/Facilities/Services.** A student must observe rules and regulations concerning the use of campus buildings and other university owned or operated facilities, vehicles, equipment and services.

**3.2.18 Computer Abuse.** A student shall not abuse university computer time or equipment, including but not limited to: CMU-hosted Blackboard, online chat rooms, Skype meetings and other social media technologies, when such resources are accessed or utilized using CMU's computers, networks, servers, or other CMU-provided technologies. Abuse includes but is not limited to: unauthorized entry or transfer of a file, unauthorized downloading or uploading of copyrighted information, unauthorized use of another individual's identification and password; use of computing facilities to interfere with the work of a student, faculty members or university officials; or use of computing facilities to interfere with normal operation of the university; or improper use of the learning management system (LMS) and digital environments. A student shall adhere to the rules and practices promulgated by the university Office of Information Technology ([www.oit.cmich.edu](http://www.oit.cmich.edu)) and the policies contained therein, including but not limited to the Copyright Infringement Responsible Use of Computing and Data Stewardship Policies.

**3.2.19 Bullying/Hazing/Harassment.** A student shall not bully, haze or harass any person or group of persons. Telephone harassment, texting, email, computer or online social media harassment, are included under this policy, as are all other forms of bullying and harassment.

**3.2.20 Civil Disorder.** A student shall not participate in a riot or civil disorder, which is defined as five or more persons, acting in concert, who intentionally or recklessly cause or create a serious risk of causing public terror or alarm.

**3.2.21 Aiding Civil Disorder.** A student shall not, intending to cause or aid or abet the institution or maintenance of a riot or civil disorder, act or engage in conduct which urges other persons to commit acts of unlawful force or violence or the unlawful burning or destroying of property or the unlawful interference with a police officer, peace officer, firefighter or member of the Michigan National Guard or any unit of the armed services officially assigned to civil disorder duty in the lawful performance of their duty.

**3.2.22 Participation in Riot.** A student shall not assemble or act in concert with four or more persons for the purpose of engaging in conduct which creates a serious risk of a riot or civil disorder or be present at an assembly that either has or develops such a purpose and remain there after an order has been given to disperse.

**3.2.23 Violation of Injunction.** A student shall not violate the terms of any injunction regulating conduct in Isabella County or the terms of the Mt. Pleasant Nuisance Party Ordinance during and as part of a riot or civil disorder.

**3.2.24 Discrimination.** Violation of the CMU Nondiscrimination Policy or the Equal Opportunity and Affirmative Action protocol shall be treated as an offense under these regulations.

**3.2.25 Violations by Registered Student Organizations.** Violation by Registered Student Organizations of these regulations, and other rules pertaining to Registered Student Organizations as outlined in the Registered Student Organization Manual shall be treated as an offense under these regulations.

**3.2.26 Violation of Residence Hall Rules.** Violation of "Residence Hall Rules" shall be treated as an offense under these regulations.

**3.2.27 Collusion.** A student who shall with any one or more persons enter into a combination or agreement, expressed or implied, to commit a violation of any of these regulations, is in violation of the regulation. Students are responsible for the actions of their guests while present on CMU property or at university sponsored activities.

**3.2.28 Aiding/Abetting.** A student implicated in the violation of any regulation in this document, whether the student directly commits the act constituting the violation or procedures in connection with it, or aids or abets in its commission, may be treated under the regulations as if the student had directly committed such violation.

**3.2.29 Violation of Federal/State/Local Law.** Violation of federal, state or local law in a manner that affects the university shall be treated as an offense under these regulations.

**3.2.30 Retaliation.** A student, group of students, or registered student organization shall not retaliate against any student who files a complaint or grievance; requests an administrative hearing; participates in an investigation; appears as a witness in an administrative hearing; or opposes an unlawful act, discriminatory practice, or policy.

**3.2.31 Violation of University Regulations.** Violation of other university regulations, policies or established procedures shall be treated as an offense under these regulations.

**3.2.32 Unauthorized Fires.** No student shall start or allow to be started a fire with the intent to destroy property including their own and/or rubbish.

**3.2.33 Arson.** A person who uses, arranges, places, devises, or distributes an inflammable, combustible, or explosive material, liquid, or substance or any device in or near a building, structure, other real property, or personal property with the intent to commit arson or who aids, counsels, induces, persuades, or procures another to do so is in violation of arson.

#### 4. Official University Sanctions

**4.1 Sanctions.** Sanctions that may be imposed for violation of university regulations include the following:

**4.1.1 Reprimand:** A written reprimand, including the possibility of more severe disciplinary sanctions in the event of the finding of a subsequent violation of university regulations within a stated period of time.

**4.1.2 Restitution:** Reimbursement for defacement, damage to, or misappropriation of property. The person or body imposing this sanction may impose another allowed sanction as an alternative if restitution is not made within the time specified.

**4.1.3 Fines:** Fines may be levied. In no circumstance shall the fine levied exceed \$1,000. Failure to pay a fine in the time limit prescribed shall result in further disciplinary action.

**4.1.4 Removal from University Housing:** Cancellation of contract and requirement to vacate university housing within a specified period of time. If housing is not vacated within the prescribed time, additional sanctions shall be imposed.

**4.1.5 Campus Restrictions:** Limitations on the times and/or places where a student may be present on campus. If said restrictions are not observed, additional sanctions shall be imposed.

**4.1.6 Educational Programs:** Participation in educational programs, i.e., workshops, seminars, or other educational activities may be required. The person or body imposing this sanction shall impose another sanction as an alternative if the specified program is not completed within the time stipulated and may impose additional sanctions.

**4.1.7 Revocation of the Privilege of being a Registered Student Organization**

(continued)



**4.1.8 Disciplinary Probation:** Subjection to a period of critical examination and evaluation of behavior. In addition to any of the sanctions set forth above, the student or organization may be placed on probation for a stated period. Placement on probation may include additional restrictions or requirements, including but not limited to the following:

- a) Withdrawal of the privilege of campus registration of a motor vehicle,
- b) Withdrawal of the privilege of membership in a campus organization,
- c) Withdrawal of the privilege of holding office in a campus organization,
- d) Withdrawal of the privilege of representing the university in any inter-university event,
- e) Requirement to complete a specified number of credit hours with a specific grade point average during the current or subsequent academic session,
- f) Requirement to complete coursework related to the violation,
- g) Withdrawal of the privilege of using computing resources,
- h) Completion of work or other service to be provided to the university or other organization within a specified time. The person or body imposing this sanction may impose another allowed sanction as an alternative if the specified service is not completed within the time stipulated, and may impose additional sanctions.

A condition of probation may be that automatic suspension or dismissal of a student or organization shall occur upon a determination (under the procedures set forth in Article 5 herein) that a violation of a condition of probation or any other violation has occurred.

**4.1.9 Suspension/Dismissal from an Academic Program:** Exclusion from an academic program as set forth for a definite or indefinite period of time.

**4.1.10 Suspension:** Exclusion from classes and other privileges or activities as set forth for a definite period of time. Suspension may include exclusion from the campus and property belonging to the university for a stated period of time and may require an independent evaluation supporting the student or organization's return, with which CMU concurs.

**4.1.11 Dismissal:** Permanent termination of student status.

## 4.2 Additional Sanctions

Sanctions in addition to those listed in Article 4.1 may be established by the university.

## 4.3 Temporary Suspension

The university reserves the right to suspend a student, summarily and without notice, if in the judgment of the President of the university or the President's representative a student's presence would constitute a continuing danger to the student, other persons or property, or that the operation of the university would be seriously impaired. In the case of temporary suspension, the student will be given written notice of the charges against the student following the conclusion of any related investigations and a hearing before a Hearing Officer will be held as soon as possible considering the complexities of the matter and the status of any related criminal proceedings.

## 4.4 Automatic Sanctions for Grave Offenses

Certain grave offenses require that the sanctions be stipulated in advance and imposed automatically. The following shall be breaches of the student conduct regulations for which the minimum sanction of suspension is mandatory:

- 4.4.1 Bomb threat or knowingly false bomb warning.**
- 4.4.2 Willful destruction of property worth more than \$1,000.**
- 4.4.3 Willful disruption of scheduled university activities.**
- 4.4.4 Violence against persons that results in bodily injury requiring substantial medical treatment or death.**

**4.4.5 Administering or causing to be administered to any person unknowingly or against the person's will any "Controlled Substance" as defined in the Controlled Substances Act of 1971, as amended.**

**4.4.6 Sale or distribution of, or aiding or assisting in the sale or distribution of, any "Controlled Substance" as defined in the Controlled Substances Act of 1971, as amended.**

**4.4.7 Possession of a firearm or any other dangerous weapon as described in Section 3.2.14.**

**4.4.8 Participation in a riot or civil disorder as described in Section 3.2.20 or 3.2.22.**

**4.4.9 Urging other persons to commit unlawful acts during a riot or civil disorder, as described in 3.2.21.**

**4.4.10 Being present at a riot or civil disorder after an order has been given to disperse.**

**4.4.11 Violations of Sections 3.2.7 (Threat/Endangerment/Assault), or 3.2.9 (Property Damage) during a riot or civil disorder.**

**4.4.12 Violation of the terms of any injunction regulating conduct in Isabella County or the terms of the Mt. Pleasant Nuisance Party Ordinance during and as a part of a riot or civil disorder.**

**4.4.13 Violation of section 3.2.33 (Arson).**

## 5. Student Hearing Procedures for Charged Violation of Student Conduct Regulations

### 5.1 Intake Conduct Proceedings Officer

**5.1.1** A charge may be made to the Conduct Proceedings Officer by any member of the university community or may be brought by the Conduct Proceedings Officer on one's own initiative stating that a student has violated the Specific Regulations Concerning Student Conduct (3.2). Students subject to the provisions of this Code are defined as all persons who have enrolled at the university, either full-time or part-time, pursuing undergraduate, graduate, or non-degree studies. Persons who have been enrolled at the university, and who have not withdrawn (or been academically dismissed), are students even when they are not enrolled for a particular term. Students also include persons who have been admitted to the university and who, before their first attendance, participate in activities intended only for prospective students (e.g., orientation, leadership, band, or other camp, athletic training and practices).

**5.1.2** One or more Conduct Proceedings Officers shall be appointed by the President or the President's designated representative. The Conduct Proceedings Officer will make, or cause to be made, an investigation of the charge.

**5.1.3** If, from the investigation, the Conduct Proceedings Officer determines the matter may be reason for discipline under the student conduct regulations, the Conduct Proceedings Officer will notify the student that a charge has been made and will offer the student an opportunity to discuss the matter.

If notified by either United States mail or by university email, the notice will be mailed to the last address for the student on file with the university Office of the Registrar. The notice will be deemed received two (2) business days following the date the notice is posted at facilities of the United States Post Office (for U.S. Postal mail) or immediately upon delivery for electronic mail. In the absence of mailing, personal delivery to the student cited, or delivery to the last address on file in the Office of the Registrar constitutes proper notice. If personal delivery to the student or delivery to the last address is used, the date notice is so delivered shall be deemed the date the notice is received.

The student will have two (2) business days from the date of receipt (through any of the mediums listed above) in which to respond to the notice. If the student has not responded at the end of this two-day period, the Conduct Proceedings Officer will set up a hearing.

**5.1.4** The student may bring an advisor of the student's choice to the discussion with the Conduct Proceedings Officer. If the student's advisor is an attorney, the student must notify the Conduct Proceedings Officer of this at least three (3) business days in advance of the discussion. The advisor's role is limited to providing advice to the student. The advisor is not permitted to ask or answer questions or make oral arguments. Any case presented must be made by the student.

**5.1.5** If the student chooses to discuss the matter, the Conduct Proceedings Officer will at the discussion inform the student of the charge(s) and the regulation(s) which are alleged to have been violated and will explain to the student the process outlined in this document.

#### **5.1.6 Student Admits Violation**

**5.1.6.1** If the student admits to the violation, the Conduct Proceedings Officer may:

- a) Issue a sanction
- b) Order that the sanction be set by a university Hearing Officer, or
- c) Enter into a written, mutually acceptable, behavioral contract with the Student and/or
- d) Refer the student for counseling.

**5.1.6.2** The student charged or the person or group who first brought the charge, or the university, may appeal the sanction (except the terms of a behavioral contract), by a letter delivered to the Office of the Conduct Proceedings Officer or university Hearing Officer within five (5) business days after the Conduct Proceedings Officer has set the sanction. Since admission of the violation by the student is a prerequisite to the Conduct Proceedings Officer acting under this section, such an appeal will only be as to the appropriateness of the sanction and not the fact of whether the violation occurred.

Once a student admits a violation for which there is an automatic sanction, the sanction is automatically imposed and only the terms of a suspension may be appealed. The appeal is to the Appeals Board.

#### **5.1.7 Student Does Not Admit Violation**

After discussion with the student, the Conduct Proceedings Officer may determine that the matter requires no further action. The Conduct Proceedings Officer will refer the matter for hearing if:

**5.1.7.1** The student denies the charge and the Conduct Proceedings Officer determines the matter may be reason for discipline.

**5.1.7.2** The student chooses not to discuss the matter at the discussion offered by the Conduct Proceedings Officer. The student will be notified of the date and time of the hearing.

#### **5.1.8 Alternative Resolution**

**5.1.8.1** Mutual Settlement. In lieu of referral to a hearing or prior to a student's admission of a violation of the Code, the Conduct Proceedings Officer may offer or accept mutual settlements of any charged violations under this code. Settlements shall be in writing and shall state the conditions of the agreement and any sanctions imposed. Mutual settlements may not be appealed.

Cases not settled in a timely manner shall proceed to a hearing.

**5.1.8.2** Counseling. In lieu of, or in addition to, a sanction or referral to a hearing the Conduct Proceedings Officer may refer the student for psychological counseling.

**5.1.8.3** Behavioral Contract. In lieu of, or in addition to, a sanction or referral to a hearing, the Conduct Proceedings Officer may arrange a behavioral contract with the student. A behavioral contract is a mutually acceptable agreement between the university and a student that specifies certain behavior with which the student must comply, and specifies automatic sanctions that will be imposed if the contract is broken. If the contract is broken, as determined by a finding of fact under procedures set forth in Article 5 herein, the student may be suspended from the university as determined by the Conduct Proceedings Officer. In cases where suspension is automatic under the terms of a behavioral contract, a hearing to determine if the contract has been broken will be on fact only.

**5.1.8.4** Referral to Behavioral Evaluation Team. In lieu of referral to a hearing, the Conduct Proceedings Officer and the student may agree to a referral to a process provided by the Care Team, Care Team Coordinator, or Behavioral Evaluation Team. This option is available in situations where the alleged conduct of the student appears to be related to a mental health concern(s) or emotional issues(s).

#### **5.2 Hearings**

There are two hearing forums: The university Hearing Officer and the university Hearing Body. The Conduct Proceedings Officer will assign a case to one of these forums, except that in cases where there is potential for a sanction of suspension or dismissal, the student may choose which hearing forum will hear the case. The student will have two (2) business days from the date of the meeting with the Conduct Proceedings Officer to make a final choice in writing to the Conduct Proceedings Officer. If no such timely choice is made, the Conduct Proceedings Officer will designate whether the case will be heard by a Hearing Officer or Hearing Body. The student will be notified of the time and date of the hearing.

##### **5.2.1 University Hearing Officer**

**5.2.1.1** One or more university Hearing Officers will be appointed by the President or the President's designee and must participate in the appropriate training sessions regarding the Code of Student Rights, Responsibilities and Disciplinary Proceedings.

**5.2.1.2** The university Hearing Officer will be assigned by the Associate Vice President for Student Affairs, or the Director of the Office of Student Conduct, as the designee of the Associate Vice President for Student Affairs, to hear the case.

**5.2.1.3** The university Hearing Officer, based on the information presented at the hearing, determines whether the student charged violated the student conduct regulations, and sets the sanction, when applicable. Failure to complete the terms of the sanction may result in suspension from the university as determined by the Conduct Proceedings Officer. Certain violations have automatic sanctions imposed according to Section 4.4. In such cases, the university Hearing Officer will decide if a violation has occurred and, if so, the terms of a mandatory sanction.

##### **5.2.2 University Hearing Body**

**5.2.2.1** The university Hearing Body consists of one university Hearing Officer and two students.

**5.2.2.2** The students will be selected from a pool of students who are approved by the Vice President for Enrollment and Student Services or his/her designee in consultation with the Student Government Association and must participate in the appropriate training sessions regarding the Code of Student Rights, Responsibilities and Disciplinary Proceedings.

**5.2.2.3** The university Hearing Body, based upon the information presented at the hearing, determines whether the student charged violated student conduct regulations, and sets the sanction, when applicable. Failure to complete the terms of the sanction may result in suspension from the university as determined by the Conduct Proceedings Officer. Certain violations have automatic sanctions imposed according to Section 4.4. In such cases, the university Hearing Body will decide if a violation has occurred and, if so, the terms of a mandatory sanction.

##### **5.2.3 Hearing Procedures**

**5.2.3.1** In all disciplinary hearings, the burden of proof rests with the Conduct Proceedings Officer, who must prove by a preponderance of evidence that a violation has occurred.

**5.2.3.2** The student charged may have an advisor of the student's choice present at the hearing. If the student's advisor is an attorney, the student must notify the Conduct Proceedings Officer of this at least three (3) business days in advance of the hearing. The advisor's role is limited to providing advice to the student. The advisor is not permitted to ask or answer questions or make oral arguments. Any case presented must be made by the student.

**5.2.3.3** A record of the hearing, made by an audio recording device, will be kept by the Conduct Proceedings Officer at least until the appeal time is exhausted. The Conduct Proceedings Officer, on behalf of the university, will maintain all copies of these recordings.

**5.2.3.4** A university Hearing Officer presides at all hearings.

**5.2.3.5** Hearing notifications and procedures will be communicated to the charged student at least twenty-four (24) hours before the hearing.

**5.2.3.6** The Hearing Officer or Hearing Body will issue a written decision within ten (10) business days to the Conduct Proceedings Officer stating if a violation has been found, what facts support this finding, and the sanction(s) to be imposed.

**5.2.3.7** A decision letter will be emailed to the student within three (3) business days from the date the decision is received by the Conduct Proceedings Officer.

**5.2.3.8** The student charged has the right to cross-examine the complainant and any witnesses in the case against him or her. The Hearing Officer, however, has the right to determine the method the cross-examination will take (direct confrontation, submission of written questions, or any other method that, in the Hearing Officer's opinion, will elicit the desired testimony).

### **5.3 Complainant's Rights**

Central Michigan University recognizes that complainants have rights that need to be protected as well as those of the person who is cited.

**5.3.1** The complainant has the right to have a person of his or her choice accompany him or her throughout the disciplinary hearing.

**5.3.2** The complainant has the right to remain present during any disciplinary or appeal hearings.

**5.3.3** The complainant has the right to submit an "impact statement" and to suggest an appropriate sanction if the person cited is found in violation of the Code of Student Rights, Responsibilities and Disciplinary Procedures.

**5.3.4** The complainant has the right to be informed in a timely manner of the outcome of the hearing regarding the findings and the sanction.

**5.3.5** The complainant has the right to appeal either the findings or the sanction.

**5.3.6** The complainant has the right to cross-examine the student charged and any "defense" witnesses in the case. The Hearing Officer, however, has the right to determine the method the cross-examination will take (direct confrontation, submission of written questions, or any other method that, in the Hearing Officer's opinion, will elicit the desired testimony).

### **5.4 Appeals**

**5.4.1** The following matters may be appealed to the Appeals Board:

**5.4.1.1** The decision of a university Hearing Body or a university Hearing Officer as provided in Section 5.2. The appeal may be as to the facts found or the sanction set or both. If the sanction is automatic, then the appeal may only be made as to the findings, or the terms of a suspension. The appeals board may not reduce the sanction below the minimum imposed by Section 4.4 or by the terms of behavioral contracts or other disciplinary actions in which automatic sanctions are specified.

**5.4.1.2** The sanction set by the Conduct Proceedings Officer after admission of violation by the student. Imposition of any automatic sanction after such an admission may not be appealed; however, the terms or conditions of the sanction may be appealed. See Section 5.1.6.2 for more information regarding this type of appeal.

**5.4.2** The Appeals Board consists of the Student Government Association President or designee, the Chairperson of the Academic Senate or designee, and the Associate Vice President for Student Affairs or designee and must participate in the appropriate training sessions regarding the Code of Student Rights, Responsibilities and Disciplinary Proceedings.

**5.4.3** An appeal to the Appeals Board may be made by the student involved, by the person or group who first brought the charge, or by the university.

**5.4.4** An appeal is timely only if taken within five (5) business days of the decision appealed. An appeal not made within the time limit will not be heard unless the President or the President's designee makes an exception.

**5.4.5** An appeal is made by submitting a written statement of appeal to the Conduct Proceedings Officer within the time limit. The written statement of appeal must state: the name of the person appealing, the basis of the appeal, the person or group making the decision from which the appeal is made, whether a decision as to fact or sanction or both is appealed, and the remedy that the person appealing is requesting from the Appeals Board.

**5.4.6** The student charged may have an advisor of the student's choice present at the hearing of the appeal. If the student's advisor is an attorney, the student must notify the Proceedings Officer of this at least three (3) business days in advance of the hearing. The advisor's role is limited to providing advice to the student. The advisor is not permitted to ask or answer questions or make oral arguments. Any case presented must be made by the student.

**5.4.7** The Conduct Proceedings Officer is responsible for notifying members of the Appeals Board of the appeal and for setting a time and place for holding a meeting of the Appeals Board. The Conduct Proceedings Officer will provide notice of time and place of the meeting of the Appeals Board to the student(s) charged, the charging party, and other university persons deemed appropriate by the Conduct Proceedings Officer.

**5.4.8** The Conduct Proceedings Officer will assemble the documentary evidence introduced at the hearing, the record made of the hearing, and the administrative contact history made in connection with the matter and will make these materials available to the Appeals Board.

**5.4.9** The Appeals Board may establish its own procedure for conducting any appeal appropriate to the circumstances designed to achieve fairness to the student charged as well as the interests protected by the Central Michigan University Code of Student Rights, Responsibilities and Disciplinary Procedures.

**5.4.10** The Appeals Board makes its determination based solely on the record of the student's hearing, facts that are presented to the Appeals Board, and arguments before the Appeals Board. No additional witnesses, witness statements, or other materials may be introduced during the Appeal.

**5.4.11** The purpose of the Appeals Board is to decide if the findings and/or the sanction of the Hearing Body were so incorrect that the decision should be changed. It is not the purpose of the Appeals Board to substitute its judgment for that of the Hearing Officer or Body. It is not the purpose of the Appeals Board to decide if it would have reached the same decision had it been the Hearing Officer or Body. It is not the function of the Appeals Board to rehear the charges against the student; it is an appeal of the findings and/or the sanction of the Conduct Proceedings Officer, Hearing Officer or Body only as requested by the person or persons making the appeal. The Appeals Board may:

a) Find that there are not sufficient facts presented to warrant the findings of fact made at the original hearing and may set aside the finding or determine the facts differently.

b) Order that a new hearing be held.

c) Change the sanction.

d) Provide such further and additional relief or changes as dictated by fairness to the student and to the interests protected by the Central Michigan University Code of Student Rights, Responsibilities and Disciplinary Procedures.

**5.4.12** The Appeals Board must hear the appeal within fifteen (15) business days from the date the appeal is made in writing and delivered to the Conduct Proceedings Officer.

**5.4.13** A decision of the Appeals Board is final except that a decision to suspend for more than one week or to dismiss a student is subject to discretionary review by the Vice President for Enrollment and Student Services or the President (see 5.4.14). Any student responding to a charge under these procedures, any person bringing charges under these procedures, or the Administration, may make a written application to the Vice President for Enrollment and Student Services to review such a decision made by the Appeals Board. The application must be received in the Office of the Vice President for Enrollment and Student Services within five (5) business days after the date of the Appeals Board decision. Failure to make application for review within the time limit ends the right to make application for review unless the time limit is extended by the Vice President for Enrollment and Student Services. The application for review must contain the following information:

a) Name of the student(s) charged in the proceeding in which the Appeals Board has rendered a decision.

b) Name, address, and telephone number of the person making application for review.

c) A copy of the Appeals Board decision involved.

d) A statement as to what portion(s) of the Appeals Board decision the applicant wishes reviewed, and the reason(s) why the person making application for review considers the decision to be capricious, or the procedures followed to be fundamentally unfair.

e) A statement of the relief requested from the Vice President for Enrollment and Student Services by the person making application for review.

If the Vice President for Enrollment and Student Services elects to review a decision of the Appeals Board, either in part or entirely, the Vice President for Enrollment and Student Services may establish whatever procedures are deemed appropriate and consistent with fairness to govern the review.

**5.4.14** The university reserves the right for the President or the President's designee to impose a different sanction after a determination of violation, than the sanction imposed by the Conduct Proceedings Officer, Hearing Officer, Hearing Body, Appeals Board, or others under these procedures.

### 5.5 Charges Involving Student Organizations

All notices referred to in this document, when involving a Registered Student Organization, shall be sent to the president of the organization, at the president of the organization's last address on file with the Office of the Registrar, unless another representative of the organization is designated by the organization to receive such notices. When a Registered Student Organization is charged with a violation, the president of the organization shall represent the organization in the process described in Section 5, unless the Registered Student Organization designates some other representative. The representative of the student organization must be a registered student at Central Michigan, and must be a regular member of that organization.

### 5.6 Changes in Procedures

**5.6.1** The procedures set forth herein shall apply throughout the calendar year. A university Hearing Officer may be appointed by the Conduct Proceedings Officer to hear a case at times when a university Hearing Body cannot be readily assembled such as when students are not in attendance at regular sessions, during exam week, summer sessions.

**5.6.2** These procedures are subject to change by the President of the university or designee. If any change is deemed necessary, any new procedures shall guarantee a fair hearing with due process.

### 5.7 Clarifying Processes

Clarifying processes that are consistent with the Hearing Procedures in this document may be proposed by the Office of Student Conduct.



# » Policy on Academic Integrity

This Policy applies to any and all student experiences in which academic credit is involved (e.g., courses, internships, practica, theses).

## 1. Academic Integrity

Because academic integrity is a cornerstone of the University's commitment to the principles of free inquiry, students are responsible for learning and upholding professional standards of research, writing, assessment, and ethics in their areas of study. In the academic community, the high value placed on truth implies a corresponding intolerance of academic dishonesty. Written or other work which students submit must be the product of their own efforts and must be consistent with appropriate standards of professional ethics. Academic dishonesty, which includes cheating, plagiarism and other forms of dishonest or unethical behavior, is prohibited.

A breakdown of behaviors that constitute academic dishonesty is presented below. The definitions and clarifications are meant to provide additional information and examples of these behaviors. They are not intended to be all-inclusive. Questions regarding this policy or requests for additional clarification can be directed to the Office of Student Conduct.

## 2. Academic dishonesty includes:

### A. Cheating on Examinations Definition

Cheating is using or attempting to use any materials, physical or virtual, in any type of examination or evaluation which have not been specifically authorized by the instructor. Students completing any type of examination or evaluation are prohibited from looking at another student's materials and from using external aids of any sort (e.g., books, notes, calculators, and conversation with others) unless the instructor has indicated specifically in advance that this will be allowed.

#### Some examples include:

1. Students may not take examinations or evaluations in the place of other persons. Students may not allow other persons to take examinations or evaluations in their places.
2. Students may not acquire unauthorized information about an examination or evaluation and may not use any such information improperly acquired by others.

### B. Plagiarism Definition

Plagiarism is intentionally or carelessly presenting the work of another as one's own. It includes submitting an assignment claiming to be the student's original work which has wholly or in part been created by another person. It also includes the presentation of the work, ideas, representations, or words of another person without customary and proper acknowledgment of sources. Students must consult with their instructors for clarification in any situation in which the need for documentation is an issue, and what will be considered plagiarism in any situation in which their work is not properly documented.

#### Clarification

1. Every direct quotation must be identified by quotation marks or appropriate indentation and must be properly acknowledged by parenthetical citation in the text or in a footnote or endnote. As not all disciplines use quotations, please refer to the instructor for the use of a quotation in the course/discipline.
2. When material from another source is paraphrased or summarized in whole or in part in one's own words, that source must be acknowledged in a footnote or endnote, or by parenthetical citation in the text.

3. Information gained in reading or research that is not common professional knowledge must be acknowledged in a parenthetical citation in the text or in a footnote or endnote.

4. This prohibition includes, but is not limited to, the use of papers, reports, projects, and other such materials prepared by someone else.

### C. Fabrication, Forgery and Obstruction Definition

Fabrication is the use of invented, counterfeited, altered or forged information in assignments of any type including those activities done in conjunction with academic courses that require students to be involved in out of classroom experiences. Forgery is the imitating or counterfeiting of images, documents, signatures, and the like.

Obstruction is any behavior that limits the academic opportunities of other students by improperly impeding their work or their access to educational resources.

#### Clarification

1. Fabricated or forged information may not be used in any laboratory experiment, report of research, or academic exercise. Invention for artistic purposes is only legitimate under circumstances explicitly authorized by an instructor.
2. Students may not submit to instructors fabricated or forged explanations of absences or of other aspects of their performance and behavior.
3. Students may not submit, or attempt to submit, fabricated, forged or misleading information to university officials on university records, or on records of agencies in which students are fulfilling academic assignments.
4. Students may not steal, change, or destroy another student's work. Students may not impede the work of others by the theft, defacement, or mutilation of resources thus depriving others of their use.

### D. Multiple Submission Definition

Multiple submissions are the submission of the same or substantially the same work for credit in two or more courses. Multiple submissions shall include the use of any prior academic effort previously submitted for academic credit at this or a different institution.

Multiple submissions shall not include those situations where the prior written approval by the instructor in the current course is given to the student to use a prior academic work or endeavor.

#### Clarification

1. Students may not normally submit any academic assignment, work, or endeavor in more than one course for academic credit of any sort. This will apply to submissions of the same or substantially the same work in the same semester or in different semesters.
2. Students may not normally submit the same or substantially the same work in two different classes for academic credit even if the work is being graded on different bases in the separate courses (e.g., graded for research effort and content versus grammar and spelling).
3. Students may resubmit a prior academic endeavor if there is substantial new work, research, or other appropriate additional effort. The student shall disclose the use of the prior work to the instructor and receive the instructor's permission to use it PRIOR to the submission of the current endeavor.

4. Students may submit the same or substantially the same work in two or more courses with the prior written permission of all faculty involved. Instructors will specify the expected academic effort applicable to their courses and the overall endeavor shall reflect the same or additional academic effort as if separate assignments were submitted in each course. Failure by the student to obtain the written permission of each instructor shall be considered a multiple submission.

#### E. Complicity Definition

Complicity is assisting or attempting to assist another person in any act of academic dishonesty.

##### Clarification

1. Students may not allow other students to copy from their papers, even partially, during any type of examination.
2. Students may not assist other students in acts of academic dishonesty by providing material of any kind that one may have reason to believe will be misrepresented to an instructor or other university official.
3. Students may not provide substantive information about test questions or the material to be tested before a scheduled examination unless they have been specifically authorized to do so by the course instructor.
4. A student shall not upload, purchase, use, or otherwise share papers, assignments or tests with other students or internet sites that collect or sell previously used class materials. A violation includes uploading, purchasing, using, or otherwise sharing papers including after the class is complete.

#### F. Misconduct in Research and Creative Endeavors Definition

Misconduct in research is serious deviation from the accepted professional practices within a discipline or from the policies of the university in carrying out, reporting, or exhibiting the results of research or in publishing, exhibiting, or performing creative endeavors. It includes the fabrication or falsification of data, plagiarism, and scientific or creative misrepresentation. It does not include honest error or honest disagreement about the interpretation of data.

##### Clarification

1. Students may not invent or counterfeit information.
2. Students may not report results dishonestly, whether by altering data, by improperly revising data, by selective reporting or analysis of data, or by being grossly negligent in the collecting or analysis of data.
3. Students may not represent another person's ideas, writing or data as their own.
4. Students may not appropriate or release the ideas or data of others when such data have been shared in the expectation of confidentiality.
5. Students may not publish, exhibit, or perform work in circumstances that will mislead others. They may not misrepresent the nature of the material or its originality, and they may not add or delete the names of authors without permission.
6. Students must adhere to all federal, state, municipal, and university regulations for the protection of human and other animal subjects.
7. Students may not conceal or otherwise fail to report any misconduct involving research, professional conduct, or artistic performance of which they have knowledge.
8. Students must abide by the university's Policy on Research Integrity where applicable, which can be found under Policies at the following web address: [www.orsp.cmich.edu](http://www.orsp.cmich.edu). Applicability of this policy for students is found under I. GENERAL PROVISIONS, A. Applicability, number 3.

#### G. Computer Misuse Definition

Misuse of computers is disruptive, unethical, or illegal use of the university's computer resources, including any actions which violate the university's *Responsible Use of Computing*. Misuse of computers also includes disruptive, unethical, or illegal use of the computers of another institution or agency in which students are performing part of their academic program.

##### Clarification

1. Students may not use the university computer system in support of any act of plagiarism that violates the Policy on Academic Integrity.
2. Students may not monitor or tamper with another person's electronic communications.
3. Students may not use university computer resources to engage in illegal activity, including but not limited to the following: illegally accessing other computer systems, exchanging stolen information, and violating copyright agreements which involve software or any other protected material.

#### H. Misuse of Intellectual Property Definition

Misuse of intellectual property is the illegal use of copyright materials, trademarks, trade secrets or intellectual properties.

##### Clarification

Students may not violate the university policy concerning the fair use of copies. Information can be found at the following web address: [https://www2.cmich.edu/office\\_president/general\\_counsel/Documents/p03061.pdf](https://www2.cmich.edu/office_president/general_counsel/Documents/p03061.pdf).

#### 3. Ethical and Professional Behavior

Students are expected to adhere to the ethical and professional standards associated with their programs and academic courses. Such standards are generally communicated to students by instructors and are available through publications produced by professional organizations. Unethical or unprofessional behavior will be treated in the same manner as academic dishonesty.

In order to (a) protect the intellectual property interests of the instructor, (b) the academic integrity of the course for current and future students, (c) the privacy interests of student members of the class, and (d) to encourage an open and fair exposition of all student views in the classroom without fear that student views expressed will be recorded and possibly posted in another forum, students are not permitted to do any of the following without prior written consent of the instructor:

- recording of classroom lectures and conversations;
- recording or capturing online interactions among the instructor or students;
- sharing, transmitting, or publishing class materials (including lectures, slides, recordings, and discussion boards provided by the instructor) to individuals or entities not enrolled in the course and after the course is over.

Unauthorized recording, sharing, or transmitting of classroom activity and materials, including after the course has ended, is considered (a) a violation of the CMU Code of Student Rights, Responsibilities, and Disciplinary Procedures as disruptive of a student's right to learn under 3.2.3 Disruption of Learning, (b) a violation of the Academic Integrity Policy, and/or (c) grounds for grading penalties up to an including failure in the course.

#### 4. Discretion of Instructors

Since the circumstances in which allegations of academic misconduct arise are many and varied, no single process will be appropriate to every situation. The procedures offered below are meant to cover the majority of situations. However, reasonable deviations from these procedures may be appropriate, so long as they are consistent with the following guiding principles:

(continued)

- Students must be informed about the nature of and basis for any allegations of academic misconduct and the consequences that may be imposed.
- Students have a right to contest any allegations of academic misconduct, and to provide their side of the story to the instructor.
- Once the instructor has considered the evidence and considered anything that the student may say on his or her own behalf, the instructor has the right to exercise her or his professional judgment in determining whether the student has engaged in academic misconduct, and to determine the consequences of such misconduct on the student's grade for the assignment and/or the course.
- A student accused of academic misconduct has a right to appeal the instructor's decision once the student has discussed the matter with the instructor.
- All parties should act in a reasonably prompt manner, given the circumstances.

Nothing in this policy shall prohibit an instructor from informally discussing a student's work with the student to determine whether academic misconduct has occurred, or to educate the student about standards of academic integrity, without or prior to accusing the student of engaging in academic misconduct. It is recognized that some cases of academic misconduct may be borderline, accidental, or minor. Instructors are free to address such cases as occasions for further education rather than allegations of misconduct. For example, it would be consistent with this policy for an instructor to forgo the procedures outlined below and simply educate a student who has engaged in what appears to the instructor to be minor, borderline, or accidental academic misconduct, and to allow the student to redo the work (for full or partial credit) so as to avoid any question of academic integrity.

## **5. Academic Consequences of Violations of the Policy on Academic Integrity**

A student is not permitted to withdraw from a course in which an instructor has imposed academic consequences (such as a reduction in grade) for academic misconduct. The instructor shall exercise his or her professional judgment in determining the appropriate academic consequences of the violation. Academic consequences may include a warning or reprimand, a requirement to resubmit work (with or without an additional reduction in grade for the assignment), a lowering of the grade for the assignment (including withholding of any credit for the assignment), or a lowering of the grade for the entire course (including failing the course).

A student is not permitted to complete a Student Opinion Survey for the course in which an instructor has imposed academic consequences for academic misconduct.

In addition, instructors are encouraged to report serious incidents of academic misconduct to the Office of Student Conduct for formal proceedings seeking disciplinary sanctions under the Code of Student Rights, Responsibilities and Disciplinary Procedures.

## **6. Procedures for Handling Alleged Violations of this Policy**

### **A. Initial Notification**

If an instructor believes that a student has committed a violation of the Policy on Academic Integrity, the instructor will attempt to contact the student within a reasonable period of time (normally ten (10) university business days) to notify the student of the suspected violation of the Policy on Academic Integrity. This contact may be in written form (including e-mail), by phone, or in person. In any case, the instructor should convey to the student the following information:

- A description of the nature of the alleged violation (e.g., plagiarism on a term paper; looking at another student's work on an exam, etc.);
- The basis for believing that the student has violated the

Policy (e.g., a Turnitin originality report, a description of a report made by someone who observed the academic misconduct, etc.);

- The academic consequences that the instructor may impose if the instructor concludes that there is sufficient evidence that academic misconduct has occurred;
- An offer to discuss the matter further and to respond to the allegations. Depending on the circumstances, this further discussion may occur at a separate time, or it may be continuous with the initial notification. The discussion may take place in person, via email, or by phone. If the student declines to discuss the matter with the instructor, then the student forfeits the right to appeal the instructor's decision.

The instructor is encouraged to keep a record of this contact.

### **B. Discussion between Instructor and Student**

The instructor will offer the student an opportunity to discuss the allegation of academic misconduct, and to present any evidence or other information on his or her behalf. This discussion may be continuous with the initial contact, or it may occur at a later time. It may take place by phone, email, or in person. The instructor will determine the most appropriate format for this discussion, taking into account the details of the situation and the student's availability and preferences about how the discussion is to be conducted.

If this discussion occurs during a face-to-face meeting, either the instructor or the student may request that a mutually agreeable third party attend to serve as a neutral facilitator or observer. However, neither the instructor nor the student may be represented or accompanied by an attorney or any other advisor.

Regardless of the format of this discussion, the student will be provided the opportunity to respond to the allegation and to explain any suspected or alleged misconduct by presenting evidence, giving additional information relevant to the matter, explaining extenuating or mitigating circumstance, or acknowledging a violation.

### **C. Determination of Academic Consequences of Violation**

After either (1) the instructor and student have discussed the alleged violation of the Academic Integrity Policy, or (2) the student has admitted that they violated the Academic Integrity Policy, or (3) the student has declined to discuss the violation, then the instructor will exercise his or her professional judgment in determining whether a violation has occurred, and, if so, what academic consequences are appropriate and what grade is appropriate for the assignment and course. Once this decision has been made, the instructor should communicate their decision to the student in writing. This may be done through regular mail, campus mail, email, or hand delivery to the student. The instructor should retain a copy of this communication. Instructors are encouraged to report serious violations of the Policy on Academic Integrity to the Office of Student Conduct, and to include a copy of this communication in the report.

If the student wishes to discuss the allegations but it is not possible to have this discussion before grades are due, or if the instructor is unable to contact the student before grades are due, the instructor shall determine whether to (1) forgo submitting a grade for the student or (2) submit a grade which has been lowered to reflect the consequences of academic misconduct. If the instructor decides not to submit a grade until the matter is resolved, the system will assign a grade of "N," which the instructor will remove once the discussion with the student has occurred. If the instructor submits a grade before a discussion with the student occurs, the instructor should notify the student of this decision and offer to discuss the matter. If, as a result of the discussion, the instructor determines that the



evidence of the violation was faulty or insufficient to warrant a determination of academic misconduct, or if the instructor determines that mitigating factors presented by the student warrant a less serious academic consequence than was reflected in the grade submitted, then the instructor will file a change of grade request. In such a case, the instructor should communicate this decision to the student.

#### **D. Appeal of an Instructor's Decision**

A student may appeal the instructor's decision that a violation of the Policy has occurred, and/or the academic consequences imposed by the instructor. However, if a student has refused to discuss the matter with the instructor, the student forfeits the right to such an appeal.

The appeal must be submitted in writing to the instructor and to the dean (or the dean's designated representative, e.g., an associate dean) of the college in which the violation occurred no later than ten (10) university business days after the instructor notifies the student of her/his final decision, or ten (10) university business days after the final course grades have been posted, whichever is earlier. However, if a discussion between the student and instructor has been scheduled to be held after grades are submitted, then the student shall have ten (10) university business days after the student has been notified of the instructor's decision. An appeal not made within the time limit will not be heard unless an exception is made by the dean of the college. The written statement of appeal must state: the name of the person appealing, the basis of the appeal, the instructor making the decision from which the appeal is made, and the remedy which the person appealing is requesting from the dean.

As soon as practical, the dean will convene a committee composed of faculty and students to hear the appeal and to make a recommendation to the dean. The dean will designate one member of the committee as the Proceedings Officer. The role of the committee is to advise the dean.

The student and the instructor are each permitted to have an advisor of his or her choice present at the hearing of the appeal. If either party's advisor is an attorney, that party must notify the Proceedings Officer of this at least three (3) business days in advance of the hearing. The advisor's role is limited to providing advice to the student or instructor. The advisor is not permitted to ask or answer questions or make oral arguments.

The Proceedings Officer is responsible for notifying members of the appeals committee of the appeal and for setting a time and place for holding a meeting of the appeals committee. The Proceedings Officer will provide notice of time and place of the meeting of the appeals committee to the student, instructor, and other University persons deemed appropriate by the Proceedings Officer.

The Proceedings Officer will retain the documentary evidence introduced at the hearing, as well as the record made of the hearing; these materials will be available to the appeals committee during its deliberations, and will be forwarded to the Dean with the committee's recommendation.

The appeals committee has the discretion to establish hearing procedures which are appropriate to the circumstances, fair to all parties involved, and respectful of the values of academic integrity. Normally, the participants in the appeals hearing will appear in person; however, in unusual cases, the appeals committee may allow participation by telephone.

The purpose of the appeals committee is to determine whether the instructor abused his or her professional discretion in finding that academic misconduct occurred and/or in the choice of academic consequences for such misconduct. It is not the purpose of the appeals committee to substitute its judgment for that of the instructor. It is not the purpose of the appeals committee to decide whether it would have reached the same decision had it been the instructor. It is not the function of the appeals committee to rehear the charges against the student.

The burden of proof shall be upon the student to show that there was insufficient basis for a reasonable instructor to find that academic misconduct occurred, and/or that the instructor's selection of academic consequences for the misconduct was arbitrary, capricious, or grossly unjust (e.g., a clear departure from the instructor's announced policies). The appeals committee may:

- Uphold the instructor's decision.
- Find that the facts of the situation could not provide a reasonable instructor with sufficient basis for finding that academic misconduct occurred, and recommend that the dean of the college set aside the finding or determine the facts differently.
- Find that the instructor's selection of academic consequences for the violation was arbitrary, capricious, or grossly unjust, and recommend that the dean of the college set aside the academic consequences or impose a different academic consequence.

After receiving this recommendation the dean will either sustain or deny the appeal. The dean's decision will be in writing. The dean's decision will be final.

If it is necessary, pending the resolution of an appeal, the student will be assigned a deferred grade.

#### **E. Formal Proceedings in the Office of Student Conduct**

If the instructor believes that a student has violated the Policy on Academic Integrity, the instructor may refer the case to the Office of Student Conduct for the consideration of additional sanctions. The following procedures will be followed.

1. The instructor will inform the student that formal proceedings in the Office of Student Conduct are being requested.
2. The instructor will forward all documentation supporting the allegation of violation to the Office of Student Conduct with a cover letter describing the situation. Examples of documentation include the course syllabus, quiz or exam, assignment, source of plagiarism.
3. The "Code of Student Rights, Responsibilities and Disciplinary Procedures" will govern the sanctions which can be imposed, and the appeal process.
4. The Office of Student Conduct will determine a sanction and will notify the instructor of its determination.
5. This sanction will be recorded on the student's permanent disciplinary record, subject to release only under the terms of the Family Educational Rights and Privacy Act.

#### **F. Proceedings With a Department or Program**

##### **1. Departmental or Program Action**

- a. In cases where an instructor judges a student to have violated the Policy on Academic Integrity, that person is encouraged to report the incident to the chair of the department or unit in which the student's program is housed.
- b. Departments and programs will follow their internal procedures for deciding whether the student's status in the academic program should be reviewed because of the violation of the Policy on Academic Integrity and, if so, what review process will take place.

##### **2. Appeal of Departmental or Program Action**

A record of the department, program and/or college decision and appeal (if any) will be part of the file on the violation of Policy on Academic Integrity maintained by the Office of Student Conduct.

*Passed by Academic Senate May 5, 2009*

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# » Standards Leading to Teacher Certification

## Introduction

Students seeking to enter the Educator Preparation Programs at Central Michigan University are screened using multiple criteria related to teacher excellence. The selection criteria assess characteristics appropriate for candidates pursuing a professional teaching practice that centers around the Michigan Core Teaching Practices and the Interstate Teacher Assessment and Support Consortium (InTASC) Standards. Once a student is admitted, academic and non-academic skills are developed and monitored throughout the teacher education experience.

Excellent teachers demonstrate high-level content knowledge, varied pedagogical skills, and an ability to engage all learners. Teacher candidates at CMU are passionate about teaching and learning for all students, dedicated to equitable, just, and inclusive practices, are positive and collaborative communicators, committed to the profession and lifelong learning, and ethically and professionally responsible. Candidates must demonstrate the professional dispositions appropriate to the field of teaching in order to be recommended for certification. Professional dispositions address teacher candidates' professional attitudes, values, and beliefs as demonstrated to students, families, colleagues and community in the learning process and the teaching profession. Emphasizing the demonstration of dispositions indicates the commitment of CMU Educator Preparation Programs (EPPs) to create an atmosphere in which teacher candidates are not only taught the value of such dispositions, but the imperative of living out these attitudes, values, and beliefs in all endeavors, professional and otherwise. With an emphasis on teacher leadership, the faculty and staff of CMU's EPPs expect candidates for a Bachelor of Science in Education to understand and uphold the above dispositions as they aim to meet the unique needs of the students and teaching profession of today and tomorrow as proud CMU educators. Only qualified candidates will be recommended for certification. It is important to note any legal charge or conviction may impede a student's ability to progress through or be admitted to the teacher education program.

## Admission of Candidacy to Educator Preparation Programs

Students seeking an Elementary or Secondary Michigan Standard Teaching Certificate must follow the admission requirements for teacher education at Central Michigan University. These requirements can be found on the EHS Office of Educator Preparation Programs website at [www.ehs.cmich.edu/css](http://www.ehs.cmich.edu/css). Students are admitted to teacher education at CMU three times a year. Students complete the admission criteria for teacher education and then attend a mandatory Admission Meeting. Students may RSVP to an admission meeting through Engage Central a month prior to the admission meeting they plan to attend. After attending the mandatory meeting, they will apply to the program. Within two weeks of application, a student will be sent information regarding their admission status and next steps. Any changes mandated by the Michigan Department of Education may become effective at any time during a student's program.

## Full Admission of Candidacy to Educator Preparation Programs

Full admission has been established to verify a candidate's ongoing growth and development in CMU's Educator Preparation Programs. Requirements can be found on the EHS Office of Educator Preparation Programs website. These must be fulfilled to continue to student teaching. The requirements include, but are not limited to items such as successful completion of pre-student teaching, departmental approvals of all major and or minors and successful completion of all Professional Education coursework.

## Exit of Candidacy

Upon successful completion of CMU's Educator Preparation Programs, students will move on to graduation and then will be eligible to be recommended for Michigan certification. For details on certification requirements consult the EHS Office of Educator Preparation Programs website ([www.ehs.cmich.edu/css](http://www.ehs.cmich.edu/css)).

## Conflict Resolution and Appeal Procedure

1. A student who has a complaint regarding teacher education decisions should make known his or her complaint as soon as possible, but in no case later than thirty days after the end of the semester. Any exception to the time limitation shall be for unusual and most compelling reasons. At each step of the process, the student will be given the opportunity to present relevant information, and the reasons for the decision will be explained to the student.
2. A student who feels that arbitrary and/or capricious decisions have been made in evaluating admission, or continuing requirements for the teacher education program, or in the recommendation for certification, should meet with the Associate Director of Education Preparation (CEHS 421, The EHS Office of Educator Preparation Programs).
3. If the student is not satisfied with the Associate Director's decision, they may request, in writing, a consultation with the Director of Educator Preparation Programs. The Director of Educator Preparation Programs will evaluate the situation and make a decision.
4. If the student is not satisfied with the decision of the Director of Professional Education, the student may submit an appeal, in writing, to the Quality Assurance Systems (QAS) Committee. The QAS Committee will review the appeal and make a final recommendation.
5. Legal or serious dispositional violations may not be granted an appeal. Serious violations will be reviewed by the Director of Educator Preparation and the Dean of the College of Education and Human Services. Decisions will be final.

## Teacher Certification

For this process, students who have a degree and want to add Teacher Certification will need to earn a second degree. For more information on this process, please visit <https://www.cmich.edu/academics/colleges/college-education-human-services/student-resources/student-services-advising>.

### Validity of a Standard Teaching Certificate

Visit the Michigan Department of Education website (<https://www.michigan.gov/mde/>) Certification Guidance page for links to the most up-to-date documents and resources – a hyperlink to this page is also available under “Certification Help:” on the MOECS Login page (<https://mdoe.state.mi.us/moecs/login.aspx>).

The Standard Teaching Certificate is a five-year teaching certificate with unlimited renewals. Each renewal adds five years to the certificate’s validity. A renewal can be requested any time after January 1 of the expiration year, provided the applicant completes the Standard Teaching Certificate Renewal Requirements as described under the heading “Requirements for a Standard Teaching Certificate Renewal” listed below.

**Elementary:** Completion of a B.S. in Education/Elementary emphasis degree will qualify students for recommendation to the Michigan State Board of Education for the following grade bands: Teaching Early Childhood, Birth-Grade K and Early Childhood Special Education, Teaching Early Childhood, Birth-Grade 3 and Early Childhood Special Education, Teaching Grades PK-3, Teaching Grades 3-6, Teaching Grades PK-6 (students will choose one to two grade bands for initial certification).

**Secondary:** A certificate with secondary endorsement issued after September 1, 1988, is valid for teaching discipline area(s), as listed on the certificate, in grades 6-12.

### Requirements for a Standard Teaching Certificate Renewal

**Requirements:** (One of the following)

- 150 hours of education-related professional learning.
- An education-related master’s or higher degree earned at any time from a regionally accredited college or university (may be used one time to renew the Standard Teaching Certificate).
- A valid out-of-state teaching certificate (may be used one time to renew the Standard Teaching Certificate).

### Education-Related Professional Learning Options:

One of the following education-related professional learning options must be earned since the issue date of the most recent Standard Teaching Certificate or renewal, and they must be entered into the Michigan Online Educator Certification System (MOECS) prior to applying for the renewal for the system to recognize your eligibility:

- 6 semester credit hours appropriate to the content and grade level of the certificate and endorsement from a regionally accredited college or university; or
- 6 semester hours in a planned course of study\* from a regionally accredited college or university; or
- 150 Michigan State Continuing Education Clock Hours (SCECHs) appropriate to the content and grade level of the certificate and endorsement; or
- 150 hours of Michigan District Provided Professional Development (DPPD) appropriate to the content and grade level of the certificate and endorsement.
- Any combination of the above.

### Education-Related Professional Learning Hour Conversion:

- College credit: 1 semester credit = 25 professional learning hours
- SCECH Hours: 1 SCECH hour = 1 professional learning hour
- DPPD Hours: 1 DPPD hour = 1 professional learning hour

\*\*Credits in a planned course of study may include credits taken as part of an education-related master’s or higher degree or credits in a program that leads to an endorsement.

Requirements and procedures for a Standard Teaching Certificate Renewal, Progressing to a Professional Teaching Certificate, and Renewal of a Professional Teaching Certificate can be accessed from the Michigan Department of Education’s Michigan Online Educator Certification System (MOECS) webpage <https://mdoe.state.mi.us/moecs/login.aspx> under the Certification Help: Certification Guidance Documents link.

### Certificate Application and Renewal Fees

*Michigan Compiled Law (MCL 380.1538)* authorizes the Michigan Department of Education (MDE) to collect fees for Educator Permits, Authorizations, Endorsements, and License Applications and Renewals. The fees do not cover the issuance of a certificate, certificate printing, endorsement or authorization, but rather support the staff who evaluate applications, process paperwork, and provide guidance, technical assistance and support to educators daily. The legislated fees also provide for technological support and regular maintenance to the Michigan Online Educator Certification System (MOECS).

The document “Certification Fees” can be accessed from the Michigan Department of Education’s Michigan Online Educator Certification System (MOECS) webpage (<https://mdoe.state.mi.us/moecs/login.aspx>) under the Certification Help: Certification Guidance Documents link.

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# Updates and Corrections

- The Public Affairs Minor has been deleted from the 23-24 Bulletin by approval of the Academic Senate on 11/3/23.
- The Advanced Placement table was updated with African American Studies.
- In the Teaching English Language Arts Grades 5-12 Major - under Admissions, the first item was corrected to say EDU 107 (not ENG 107) per the original proposal. UCC minutes of 11/16/22 were corrected to reflect this. The paper 23-24 bulletin is correct.
- Information on the Dean's List was updated.
- The Department of Marketing and Hospitality Services Administration is now the Department of Marketing, Hospitality, and Logistics.
- The Biology major and minor on the B.S. in Education are on hiatus as of 8/16/23. Contact the Department of Biology for more information.
- The Offset Policy was added.
- Page 99 - on the CLEP table, the course title for Biology has been updated to *General Biology*.
- Page 113 - On the BAA, the Commercial Music Major should be listed.
- Page 173 - IPR Major - In the Admissions, Retention, and Termination Standards, the words "and elective" were removed from Item 1 of the section called *Grade Point Average* and in Item 4 under *Internship Requirements*, "including electives" was removed and "all courses" changed to "required courses."
- Page 58, Under *Satisfactory Academic Progress toward your Degree*, the "Change of Grade" section was updated.
- Page 97, French Language AP information was updated.
- Page 245 - Athletic Training Major - Updated Admissions, Retention, and Termination Standards - Admissions: Items 1, 2, and new Item 8. Retention: Item 3.
- Page 176 - Broadcast & Cinematic Arts Major - Required Courses IV was not included in the major, and has since been corrected in this pdf version.
- Information on Course Withdrawal Fee was added on page 44 and on page 92.
- The Late Registration Fee was removed from the Tuition and Fees section on page 44.
- Page 99 - Spanish Language - credit hours were updated.
- Page 225 - Recreational Therapy and Rehabilitation Major - Under Required Courses I, a note was added for clarification of when to take courses RPL 310 and RPL 518.
- Page 225 - Outdoor and Environmental Recreation Major - Under Required Professional Core Courses, a note was added for clarification of when to take RPL 518.

Check back for updates to this page: 9/16/24

The Editor regrets any inconvenience to students, faculty, and staff caused by errors to the Bulletin. If you have concerns or corrections, please call 989-774-1590 or [mcgui1lg@cmich.edu](mailto:mcgui1lg@cmich.edu).

The purpose of this bulletin is to provide information about CMU's academic programs available in the 2023-24 academic year and information concerning admissions, academic regulations and requirements, services available to students, and CMU staff and faculty. Students are responsible for ensuring that all requirements for graduation have been met. It is expected that students will regularly discuss their plans of study with academic advisors.

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