The purpose of this bulletin is to provide information about CMU’s academic programs available in the 2015-16 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. 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.

CMU, an AA/EO institution, strongly and actively strives to increase diversity and provide equal opportunity within its community.

Tobacco-Free Policy: Central Michigan University (CMU) is committed to the health and wellness of its students, faculty, staff and visitors. The tobacco-free policy will ensure that every student, employee and visitor has a healthy living, learning, and working environment.
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### University Calendar

(Tentative)

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<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td><strong>Summer Sessions</strong></td>
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<tr>
<td><strong>First Session (Six Weeks)</strong></td>
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<tr>
<td>Classes Begin</td>
<td>May 18</td>
<td>May 16</td>
<td>May 15</td>
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<tr>
<td>Registration - Drop/Add Ends</td>
<td>May 19</td>
<td>May 17</td>
<td>May 16</td>
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<tr>
<td>Memorial Day Recess</td>
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<td>May 30</td>
<td>May 29</td>
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<tr>
<td>Classes End</td>
<td>June 25</td>
<td>June 23</td>
<td>June 22</td>
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<tr>
<td><strong>Second Session (Six Weeks)</strong></td>
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<tr>
<td>Classes Begin</td>
<td>June 29</td>
<td>June 27</td>
<td>June 26</td>
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<tr>
<td>Independence Day Recess</td>
<td>July 3</td>
<td>July 4</td>
<td>July 4</td>
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<tr>
<td>Classes End</td>
<td>Aug. 6</td>
<td>Aug. 4</td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>Classes Begin</td>
<td>Aug. 31</td>
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<td>Aug. 28</td>
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<tr>
<td>Registration - Drop/Add Ends</td>
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<td>Sept. 2</td>
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<tr>
<td>Labor Day Recess</td>
<td>Sept. 7</td>
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<tr>
<td>Thanksgiving Recess</td>
<td>Nov. 25-30</td>
<td>Nov. 23-28</td>
<td>Nov. 22-27</td>
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<tr>
<td>Classes End</td>
<td>Dec. 12</td>
<td>Dec. 10</td>
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<tr>
<td>Examination Week</td>
<td>Dec. 14-18</td>
<td>Dec. 12-16</td>
<td>Dec. 11-15</td>
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<tr>
<td>Semester Ends</td>
<td>Dec. 19</td>
<td>Dec. 17</td>
<td>Dec. 16</td>
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<tr>
<td>Commencement</td>
<td>Dec. 19</td>
<td>Dec. 17</td>
<td>Dec. 16</td>
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<tr>
<td><strong>Spring Semester</strong></td>
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<tr>
<td>Classes Begin</td>
<td>Jan. 11</td>
<td>Jan. 9</td>
<td>Jan. 8</td>
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<tr>
<td>Registration - Drop/Add Ends</td>
<td>Jan. 15</td>
<td>Jan. 13</td>
<td>Jan. 12</td>
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<tr>
<td>Martin Luther King Jr. Day (no classes)</td>
<td>Jan. 18</td>
<td>Jan. 16</td>
<td>Jan. 15</td>
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<tr>
<td>Spring Recess</td>
<td>March 5-14</td>
<td>March 4-13</td>
<td>March 3-12</td>
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<tr>
<td>No Classes</td>
<td>March 31 &amp; April 1</td>
<td>March 30-31</td>
<td>April 5-6</td>
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<tr>
<td>Classes End</td>
<td>April 30</td>
<td>April 29</td>
<td>April 28</td>
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<tr>
<td>Examination Week</td>
<td>May 2-6</td>
<td>May 1-5</td>
<td>April 30-May 4</td>
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<tr>
<td>Semester Ends</td>
<td>May 7</td>
<td>May 6</td>
<td>May 5</td>
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<tr>
<td>Commencement</td>
<td>May 7</td>
<td>May 6</td>
<td>May 5</td>
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See [www.cmich.edu/registrar_office/RegistrarCalendars](http://www.cmich.edu/registrar_office/RegistrarCalendars) for updates to the calendar.
Administration 2015

George E. Ross (2002)* President; B.A., M.B.A., Michigan State University; Ph.D., University of Alabama
David E. Ash (2005) Interim President; B.A., M.B.A., Pennsylvania State University; Ph.D., University Of Pennsylvania
Raymond L. Christie (1998) Senior Vice Provost for Academic Administration; B.A., Saginaw Valley State University; M.B.A., Central Michigan University; Ph.D., Georgia State University
Roger L. Coles (1973) Interim Associate Vice Provost for Community Engagement; B.A., Western Washington State University; M.A., Central Michigan University; Ed.D., Columbia Pacific University
Charles T. Crespy (2010) Dean, College of Business Administration; B.U.S., M.A., M.B.A., Ph.D., University of New Mexico
Ian R. Davison (2008) Dean, College of Science and Technology; B.Sc., University of London; Ph.D., University of Dundee
Claudia B. Douglass (1976) Vice Provost for Academic Effectiveness; B.S., M.A.T., Indiana University; Ph.D., Purdue University
Carolyn M. Dunn (2014) Associate Vice President/Institutional Diversity; B.A., Humboldt State University; M.A., University of California - Los Angeles; Ph.D., University of Southern California
John S. Fisher (1975) Associate Vice President/Residences & Auxiliary Services; B.S., Central Michigan University; M.B.A., Central Michigan University; Ed.D., Central Michigan University
Pamela S. Gates (1987) Dean, College of Humanities and Social and Behavioral Sciences; B.S., M.A., Central Michigan University; Ph.D., Michigan State University
Michael A. Gealt (2013) Executive Vice President/Provost; B.A., Temple University; M.A., Harvard Graduate School of Education; Ph.D., Rutgers University
David Wood Heeke Jr. (2006) Associate Vice President/Director Of Athletics; B.A., Albion College; M.A., Ohio State University
Lori L. Hella (1996) Associate Vice President/Human Resources; B.A., Alma College; M.S.A., Central Michigan University
Mary Moran Hill (1986) Associate Vice President/Financial Services & Reporting/Controller; B.S.B.A., Central Michigan University
Janet Hethorn (2015) Dean, College of Communication and Fine Arts; B.A., B.A.Ed., Central Washington University; Ph.D., University of Minnesota
Steven L. Johnson (2012) Vice President for Enrollment and Student Services; A.B., Davenport University; B.B.A., Davenport University; M.A., Eastern Michigan University; M.L.E.D., Harvard University
George Kikano (2015) Dean, College of Medicine; B.S., American University of Beirut; M.D., American University of Beirut
Sherry S. Knight (2012) Associate Vice President of University Communications; B.A.A., Central Michigan University
Thomas J. Masterson, Jr. (1999) Interim Dean/Health Professions, The H.H. & G.A. Dow College Of Health Professions; B.A., University Of Wisconsin At Madison; M.A., University Of Wisconsin At Madison; Ph.D., University Of Wisconsin At Madison
Thomas J. Moore (1988) Dean of Libraries; A.B., Belmont Abbey College; M.A., State University of New York at Binghamton; M.S.L.S., Syracuse University
Dale-Elizabeth Pehrsson (2012) Dean, College of Education and Human Services; B.S., University of the State of New York; M.Coun., Ed.D., Idaho State University
Roger E. Rehm (1975) Vice President/Technology/CIO; B.M., M.M., Cleveland Institute of Music
Peter G. Ross (1991) Vice President/Global Campus; B.A., Polytechnic Of Wales; M.S., Southern Illinois University At Carbondale; Ph.D., Southern Illinois University At Carbondale
Manuel R. Rupe (2009) Vice President and General Counsel; B.A, Kalamazoo College; J.D., DePaul University; Ph.D., Western Michigan University
Anthony A. Voisin (1985) Associate Vice President for Student Affairs; B.A.A., M.A., Central Michigan University
Kathleen M. Wilbur (2002) Vice President for Development and External Relations; B.A., Michigan State University, M.A., Michigan State University
Barrie J. Wilkes (1992) Vice President for Finance and Administrative Services; B.A., Michigan State University

*The year in parentheses indicates the date first employed by the university.
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From the President...

It is my honor to welcome you to Central Michigan University.

I often say that at the end of the day, CMU graduates leaders. Your success is the university’s top priority. You will discover this when you choose to take advantage of the opportunities and education available for you here. As you give us your best effort, we’ll support you in gaining real-world experiences and developing career-related skills to guide your personal path to learning.

Founded in 1892, CMU continues its mission to proactively offer students enhanced learning experiences inside and outside the classroom. We’ve demonstrated this in many ways. Our $95 million Biosciences Building currently under construction is the largest construction project in CMU history and will open for classes in January 2017. This facility and its programs will address escalating student demand and deliver state-of-the-art education and research opportunities.

If you need classes that fit into your busy schedule, CMU Global Campus offers online programs that U.S. News & World Report ranks among the best in the nation and the highest in Michigan. These rankings demonstrate that you will have access to the same top quality programs, faculty and student support systems that are available on CMU’s main campus.

No matter which academic programs you choose, you will learn from accomplished professors who are dedicated to engaging you in the university learning experience. Then, you soon will join the proud network of more than 212,000 CMU alumni worldwide.

Education has the power to transform lives, communities, nations and the world. On behalf of the entire university family, I welcome you to CMU and am excited to see how you will put your stamp on the world.

Best regards,

George E. Ross, Ph.D.
President
From Graduate Studies and Enrollment & Student Services...

We would like to welcome new and returning graduate students to Central Michigan University and encourage potential students to consider one of our many outstanding programs at the graduate certificate, master and doctoral levels.

An advanced degree is increasingly required for jobs that lead to professionally and financially rewarding careers. CMU is classified by the Carnegie Foundation as a doctoral research university and is one of America’s 100 largest universities. Located in the classic college town of Mount Pleasant, CMU offers a friendly, safe and accessible campus.

Almost every academic department in CMU’s seven colleges offers at least one M.S. degree in addition to interdisciplinary programs. Ph.D. degrees include Educational Leadership, Earth and Ecosystem Science, Mathematics, Science of Advanced Materials, History, and several degrees in Psychology. Professional degrees include a Master in Professional or School counseling, Business Administration, and Nutrition, as well as doctorates in Audiology, Physical Therapy and Medicine.

In addition to our on-campus programs, CMU serves students across the U.S. and around the world, either online or at one of more than 45 off-campus locations. This includes our most popular program, the Master of Science in Administration, with concentrations such as Engineering Management, Human Resources Administration and Public Administration.

Beyond the classroom, the CMU experience includes hands-on research opportunities, outdoor recreation, 18 Division I sports teams that have won 40 Mid-American Conference championships in the past decade, and nearly 400 student organizations.

As you use this Graduate Studies Bulletin to explore all the details related to graduate school, please know that help is only a phone call or e-mail away. From our offices, to the graduate coordinator of your program, to your faculty thesis-supervisor for research-based programs, we’re here to support you.

Thank you for choosing CMU. Our senior administration, graduate staff and, most importantly, hundreds of outstanding faculty members are dedicated to guiding you through this stage of your education. In return, you’ll take away a valuable graduate degree and lasting, fond memories of your experience as a Chippewa.

David E. Ash
Interim Vice President for Research
and Dean of Graduate Studies

Steven L. Johnson
Vice President for Enrollment
and Student Services
Graduate Study at Central Michigan University

The College of Graduate Studies

The College of Graduate Studies is the primary administrative unit for graduate students enrolled at CMU. On a daily basis, the College of Graduate Studies handles all types of issues affecting graduate students, from admission through the awarding of graduate certificates and degrees.

The Office of Research and Graduate Studies is the academic authority for the College of Graduate Studies. Working in partnership with CMU’s six other colleges, the Vice Provost for Research and Dean of Graduate Studies works to ensure the highest academic quality in all graduate programs, promotes and supports graduate student research and creative endeavors, as well as a myriad of other efforts to support the academic mission of the College of Graduate Studies and Central Michigan University.

Graduate Student Services assists prospective, new, and current graduate students throughout their graduate career at CMU. Whether you are applying for admission, applying for graduation or somewhere in between, Graduate Student Services is here to assist and support your educational endeavors.

The staff of the College of Graduate Studies is here for you. If you have questions of an academic nature, we encourage you to contact your academic program, or the Office of Research and Graduate Studies. If you have general questions about graduate education at CMU, your application, or graduation, please contact the Graduate Student Services office. However, any of our staff in the College of Graduate Studies are happy to be of assistance.

Contact information:
College of Graduate Studies
Central Michigan University
Mount Pleasant, Michigan 48859
https://centrallink.cmich.edu/academics/grad_studies/orgs@cmich.edu
grad@cmich.edu

Office of Research and Graduate Studies
Foust 251
989-774-6777

Graduate Student Services
Foust 100
989-774-4723

Campus Visits

Graduate Studies welcomes visits from prospective students and their families to Mount Pleasant and the CMU community. Graduate Student Services can provide campus maps and information. Students should contact the academic departments before their visit and set up appointments to meet with faculty members, department chairs, or graduate coordinators.

If you arrive by car, stop first at CMU Parking Services located in the CMU Police office in the Combined Services Building on East Campus Drive (between Broomfield and Preston streets), for assistance with visitor parking.

Using this Bulletin

Take time to carefully read the general and academic information sections of this 2015-2016 Graduate Studies Bulletin. These explain university policies and procedures that govern your academic degree and you are expected to know. This section also describes services and programs available to you. To find the department in your area of interest, consult the Index of this Bulletin. Each departmental description begins with the chairperson’s office address and telephone number.
An Introduction to Central Michigan University

The University Setting

Central Michigan University is among the nation’s 100 largest public universities, with more than 19,000 students on its Mount Pleasant campus. CMU also has nearly 9,000 students enrolled online and at more than 50 locations across North America, including 16 centers and sites across the state of Michigan.

CMU offers academic programs at the undergraduate, master’s, specialist and doctoral levels, including nationally recognized programs in entrepreneurship, journalism, music, audiology, teacher education, psychology and physician assistant medical and health sciences. CMU also established a College of Medicine in 2012, which has already been recognized across the nation for its life sciences program and prime location.

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 has been nationally recognized for its Leadership Institute and academic minor in leadership, the first one to be offered by a Michigan university.
- The award-winning Honors Program administers the prestigious Centralis Scholarship Program and oversees approximately 200 faculty-mentored honors undergraduate research projects annually.
- Thousands of students work through the Mary Ellen Brandell Volunteer Center to help others locally, nationally and around the world. More than 12,700 CMU students or 68 percent volunteer each year. This exceeds the national average of 59 percent for all universities.
- CMU ranks 14th in the country for the number of Native Americans earning baccalaureate degrees and No. 15 for the number of African Americans earning graduate and professional degrees.
- CMU is the nation’s foremost university authorizer of charter public schools with 64 schools educating more than 30,000 students in grades K-12.
- CMU’s academic residential halls enhance learning and community in business, education and human services, health professions, science and technology, music, honors, leadership and public service.
- Thirteen new academic, athletic and residential buildings have been built on CMU’s campus in the last 13 years, including the College of Medicine Building, which opened in September 2012; the Graduate Housing Apartments that opened in July 2013, and the Biosciences building, which is under construction.

Cutting-edge Student Research

Students have helped conduct cutting-edge research in Parkinson’s and Alzheimer’s diseases, the creation of biofuels and longer-lasting batteries, and developing improved methods of water purification. In addition, through the university’s Institute for Great Lakes Research, CMU biology researchers acquired the only unmanned helicopter in Michigan equipped with a hyperspectral camera to advance research imaging of Great Lakes wetlands – the world’s largest group of freshwater lakes.

Culture, Community, Resources

CMU is located in Mount Pleasant, Mich., a classic college town at the heart of central lower Michigan. Mount Pleasant serves as the county seat for Isabella County and is home to 26,000 of the county’s more than 70,000 people and growing. Mount Pleasant offers a blend of natural features, family attractions and small-town life complemented by university culture. Friends, family members, siblings and visitors are always welcome to come explore CMU’s park-like campus or to 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 available space, the Events Center serves the cultural and entertainment needs of the campus and community, hosting a wide variety of events, from commencement to concerts and speaking engagements to business expos.
- Athletics. Central Michigan University competes in seven men’s and 11 women’s sports with the addition of women’s golf and women’s lacrosse. CMU’s NCAA Division I student-athletes are accomplished both on the field and in the classroom. CMU has won more than 80 MAC championships in 15 different sports and the football program has participated in a postseason bowl game six of the past nine years. The Chippewas are regular contenders for the MAC’s award for the highest institutional GPA and CMU’s soccer and field hockey programs have had unprecedented success in the classroom as both squads have posted the nation’s highest GPA among all NCAA Division I programs in the past few seasons. CMU won the league’s inaugural Cartwright Award for overall program excellence in 2009.
- Charles V. Park Library. Central Michigan University library houses more than 1 million print volumes on 33 miles of electronically movable shelving, but it doesn’t take a personal visit to acquire these resources. The library’s Global Campus Library Services is a well-established model of extended electronic access for higher education. The Clarke Historical Library, located along the main corridor of the library, regularly displays items from its extensive list of historical holdings.
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 Priorities

**Priority 1: Student Success**
Challenge our students to develop the knowledge, skills, and values to be successful and contributing global citizens.

**Priority 2: Research and Creative Activity**
Promote excellence in research and creative activities.

**Priority 3: Quality Faculty and Staff**
Foster a vibrant, innovative, intellectual community of high quality faculty and staff who value inclusiveness, diversity, shared governance, and respect.

**Priority 4: Community Partnerships**
Develop and strengthen learning experiences through collaboration with local, national, and global partners to enhance cultural awareness, the natural environment, health and wellness, and local economies.

**Priority 5: Infrastructure Stewardship**
Align university resources and infrastructures to support the university’s mission and vision.
Adopted by the Board of Trustees, December 6, 2012

The Enduring Philosophy
In its more than 120 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.”
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.

Accreditations

Regional accreditation has been granted to more than 2,500 higher education institutions throughout the United States. This accreditation must be awarded by one of six organizations, each focusing on a specific region of the country. Accreditation is recognized by the United States Department of Education and federal financial aid is 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 2005-2006, at which time CMU was reaccredited 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.

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 Teacher Education Accreditation Council (TEAC). 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 masters 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: National Association of Schools of Art and Design; Commission on Accreditation of Athletic Training Education; Accreditation Commission for Audiology Education; Council on Academic Accreditation in Audiology and Speech-Language Pathology; American Chemical Society; Engineering Accreditation Commission of ABET (http://www.abet.org); National Environmental Health Science and Protection Accreditation Council (EHAC); National Council on Family Relations; Association of University Programs in Health Administration; Council for Interior Design Accreditation; Accrediting Council of Education in Journalism and Mass Communication; Liaison Committee on Medical Education, National Association of Schools of Music; Accreditation Council for Education in Nutrition and Dietetics; Council on Accreditation of Parks, Recreation, Tourism, and Related Professions; Commission on Accreditation in Physical Therapy Education; Accreditation Review Commission on Education for the Physician Assistant, Inc. (see the M.S. in Physician Assistant information regarding this accreditation); American Psychological Association; National Association of School Psychologists; National Association of Schools of Public Affairs and Administration; Council on Social Work Education; Commission on Sport Management Accreditation, Association of Technology, Management and Applied Engineering. The National Association for the Education of Young Children (NAEYC) accredits CMU’s Human Growth and Development Pre-School lab.

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
  - Web: www.apa.org/ed/accreditation

CMU is also on the approved list of the American Association of University Women of Michigan.

Individuals who wish to review the accreditation documents should contact the office of Academic Effectiveness. Further information regarding specific program accreditation status is located at: https://www.cmich.edu/office_provost/AcademicAffairs/Accreditation/.

Civil Rights and Institutional Equity

CMU, an AA/EO institution, strongly and actively strives to increase diversity and provide equal opportunity within its community. CMU does not discriminate in employment against persons based on age, color, disability, gender, gender identity/gender expression, genetic information, familial status, height, marital status, national origin, political persuasion, race, religion, sex, sexual orientation, veteran status, or weight (see http://www.cmich.edu/aaeo).

Affirmative action is a set of specific and results-oriented measures taken to bring about equal opportunity. At CMU, the Office of Civil Rights and Institutional Equity coordinates and monitors the university’s affirmative action/equal opportunity efforts and programs to assure compliance with Americans with Disabilities Act, Title VII of the 1964 Civil Rights Act, Title IX, Executive Order 11246 and other relevant state and federal statutes.

The office 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, assists departments with recruitment and retention activities, and receives and resolves complaints of discrimination from students, employees and others.

To view the Board of Trustees Nondiscrimination Policy, see https://www.cmich.edu/office_president/OCRIE/Pages/Nondiscrimination-Statement.aspx.

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); https://www.cmich.edu/office_president/OCRIE/Pages/Contact_Information.aspx.
Office for Institutional Diversity

Carolyn M. Dunn, Associate Vice President
Warriner 319; 989.774.3700; cmich.edu/office_provost/OID

The Office for Institutional Diversity (OID) 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 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. Through the following offices and services, the OID offers campus-wide programs and activities for students, faculty, and staff to enhance their cultural competence and global perspectives. In addition, the OID monitors progress of CMU’s academic, social, and cultural diversity programs and initiatives, including the Strategic Plan for Advancing Diversity.

The main campus offices, which report to the Associate Vice President for Institutional Diversity, are located in the Center for Inclusion and Diversity (CID - Bovee University Center 108; 989-774-3711). The CID includes a conference room and a space for exhibits and receptions. Students are encouraged to visit the Center during the week to learn about program offerings and view the exhibits.

For the following departments, go to the website above and click on Diversity Units.

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.

Office of Diversity Education
The Office of Diversity Education’s (ODE) mission is to assist in building a more inclusive and respectful community on campus. The programs coordinated through ODE provide opportunities for learning about the diversity of people and cultures represented at CMU, and help students prepare for a more diverse and interconnected world. ODE coordinates the Intergroup Dialogue and Recognition of Cultural Competency opportunities for undergraduate students. ODE also sponsors speakers, art exhibits and other events. In collaboration with other offices on campus, staff coordinate and develop diversity workshops and assist faculty with making their courses more inclusive. Contact Information: Bovee University Center 110B; 989-774-7318.

Native American Programs
The cultural and social programs offered by the Native American Programs office allow the campus community to come together to learn about Native American people and share in a rich culture and traditions. The office serves several purposes. It attracts American Indian students to CMU and helps them achieve their educational goals; it serves as a liaison to Michigan’s Indian communities to determine their educational needs; and it sponsors programs that provide opportunities for everyone to experience native cultures through activities, organizations and events. Contact Information: Bovee University Center 110C; 989-774-2508; e-mail: NAP@cmich.edu.

Office of Lesbian, Gay, Bisexual, Transgender, and Queer 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 lesbian, gay, bisexual, transgender and queer(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 110A; 989-774-3637.

MI GEAR UP Program
MI GEARUP (Michigan Gaining Early Awareness & Readiness for Undergraduate Programs) is a grant awarded to Central Michigan University. It is funded by the King-Chavez-Parks Initiative Workforce Development Agency. The 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 1200 students in six schools with the goal of providing information and encouraging students to graduate and go on to college prepared to succeed. 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. Contact Information: Bovee University Center 108-B; 989-774-1585; e-mail: gearup@cmich.edu.
**Pathways**

Pathways (Pathways to Academic Student Success) is a grant awarded to Central Michigan University. It is funded by the King-Chavez-Parks Initiative Workforce Development Agency. 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 will coordinate with campus partners to provide academic guidance, leadership development and mentoring. Contact information: Center for Inclusion and Diversity, Bovee University Center 108A; 989-774-1585.

**Upward Bound**

The CMU Upward Bound is a federally funded pre-college program through the U.S. Department of Education and is designed to help economically disadvantaged and/or first generation college-bound students complete high school and prepare for college. CMU is the host institution for Upward Bound. The program intent is to encourage youth to complete high school and enter post-secondary education. Resource and assistance is offered in all aspects of the college admissions process, including, but not limited to, financial aid and scholarships completion, college applications and visits, as well as academic support workshops. It is here that students are offered free tutoring in all subjects. Weekly programs that highlight education, career, and social awareness are provided to open the eyes, hearts, and minds of the students. The Upward Bound 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. Contact information: 313-215-0738.

**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, Summer Conference, 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: micup-step@cmich.edu.

**For more information**

To see more information on any of these programs, see cmich.edu/office_provost/OID.

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**Office of International Affairs**

Ronan Hall 330; 989-774-4308; www.oia.cmich.edu

**Mission**

The mission of the Office of International Affairs (OIA) is to support the University’s central purpose of educating students who will be responsible global citizens and effective world leaders. OIA provides campus-wide leadership in coordinating, planning and developing international programs and initiatives.

OIA’s role includes international student recruitment, undergraduate international student and English language student admissions, services to international students and faculty, and coordination of linkage agreements with universities and other educational institutions outside of the United States.

To achieve its goals, OIA:

1. develops recruiting strategies to increase the number of international students studying at CMU, as well as the cultural diversity of the international student population;
2. provides comprehensive support services to international students and faculty so that they will have a smooth transition to CMU life and a successful stay at CMU;
3. enhances the level of international understanding among members of the CMU community by sponsoring, organizing, and developing international programs that are academically, culturally, and socially beneficial; and
4. maintains an up-to-date CMU International Education Information Clearinghouse.

The OIA serves as a resource to the international community at Central Michigan University by providing orientation services for new international students, serving as an advocate on campus and providing support for its needs. The office assists international students, scholars and faculty in understanding immigration regulations and maintaining valid legal status in the United States. The OIA is responsible for maintaining university compliance with federal reporting regulations for international students and scholars.
CMU’s Office of Study Abroad (OSA) offers a variety of opportunities abroad for graduate students. Study abroad provides students with opportunities to expand their view of the world and prepares them for a career in the global workforce. International study enhances students’ education in many ways; students have an opportunity to meet people with diverse cultural backgrounds, to gain global knowledge that is highly valued by modern employers, and to develop a sense of independence and self-confidence that leads to a lifetime of success.

In addition to academic year and semester programs, CMU offers short-term programs in summer as well as faculty-led short-term programs around the world. Other short-term programs around the world are also available in summer. Students wishing to study a foreign language have a significant number of options available that include intensive language programs, academic subjects in a foreign language, as well as an option to learn languages not taught at CMU. Knowledge of a foreign language is not a requirement to study abroad because there are many programs around the world that offer courses taught in English. Course credit approval may be obtained in advance from the academic department. For the full list of options, please visit the Study Abroad website.

Studying abroad does not have to be expensive. There are a number of resources available to help fund study abroad. OSA offers study abroad scholarships each year to full-time, matriculated graduate students. In addition, there are scholarships available through colleges and/or academic departments and from sources outside the university to help students fund their international study. Students participating in a CMU-approved study abroad program may also continue to receive financial aid through the Office of Scholarships and Financial Aid, and may apply for additional assistance to cover the study abroad program costs. See the Fund Study Abroad section of our website for the list of scholarships available.
General Information

Academic Overview

Doctoral Degrees
- Audiology
- Earth and Ecosystem Science
- Education: Educational Leadership (Ed.D.)
- Educational Leadership (Ph.D.)
- Educational Technology
- Health Administration*
- History
- Mathematics: Teaching College Mathematics
- Medicine
- Neuroscience
- Physical Therapy
- Psychology, Applied Experimental
- Psychology, Clinical
- Psychology, Industrial/Organizational
- Psychology, School
- Science of Advanced Materials

Specialist’s Degrees
- Education: General Educational Administration
- Psychological Services: School Psychology

Master’s Degrees
- Administration (MSA)
- Apparel Product Development and Merchandising Technology
- Applied Statistics and Analytics
- Biology
- Broadcast and Cinematic Arts
- Business Administration (MBA)
- Chemistry
- Chemistry, Teaching College
- Communication
- Computer Science
- Counseling
- Cultural Resource Management
- Early Childhood Education
- Economics
- Education*
- Educational Leadership
- Educational Technology
- Engineering
- English Language and Literature
- English: Composition and Communication
- Exercise Physiology
- Geographic Information Sciences
- Higher Education Administration
- History
- History, Joint
- Humanities
- Information Systems
- Integrated Science, Teaching
- Mathematics
- Music
- Neuroscience
- Nutrition & Dietetics
- Physician Assistant
- Physics
- Political Science
- Psychology, Experimental
- Psychology, Industrial/Organizational

Public Administration
- Public Health
- Reading and Literacy (K-12)
- Recreation and Park Administration
- Spanish
- Special Education: The Master Teacher
- Speech-Language Pathology
- Sport Administration
- Teacher Leadership
- Teaching English to Speakers of Other Languages (TESOL)
- Therapeutic Recreation

Accelerated Degrees (Bachelor’s and Master’s)
See page 28 for more information.
- Administration (MSA - Any Concentration)*
- Apparel Product Development and Merchandising Technology
- Business (MBA) - Accounting Emphasis
- Computer Science
- Economics
- Engineering
- Geographic Information Sciences
- Higher Education Administration
- History
- Mathematics
- Political Science
- Psychology, Experimental
- Spanish

Graduate Certificates
- Acquisitions Administration
- Autism
- Citizen Engagement
- College Teaching
- Cultural Resource Management
- Cybersecurity*
- Data Mining
- Educational Technology
- Engineering Management*
- Enterprise Systems*
- European History
- General Administration
- Health Services Administration
- Health Systems Leadership
- Human Resources Administration
- Information Resource Management
- International Administration
- International Health
- Leadership
- Logistics Management*
- Modern History
- Nutrition and Dietetics
- Philanthropy and Fund Raising
- Professional Development in Public Administration
- Public Administration
- Recreation and Park Administration
- Research Administration
- United States History

*Many graduate programs listed here are also offered online or at Global Campus locations. See http://global.cmich.edu. Programs with an asterisk are only offered through Global Campus.
University Libraries

The University Library in the Charles V. Park Library building offers a broad range of collections and services for students, faculty, and staff. Its collections contain more than one million books and other print items, 50,000 electronic books, 125 electronic periodical article databases, electronic access to the full-text content of more than 30,000 journals, and more than 15,000 multimedia items. Electronic collections are available around the clock, on or off campus, at library.cmich.edu. Additionally, the Park Library is a selective federal and state 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 interlibrary loan service, Documents on Demand.

The University Library provides a wide array of services and study spaces. More than 300 computer workstations are available within the building, and wireless access is available for laptops and mobile devices. Printers, photocopiers and scanners are also available. Students can check out study rooms for individual and group study; some rooms include multimedia equipment. The building is open nearly 100 hours/week, and an extended-hours study room offers additional hours of study space.

Reference librarians are available to assist with research projects and to help users effectively access library resources. Users may consult with a librarian in person at the reference desk on the second floor of the library and also by email, chat, and telephone. The librarians also provide formal, course-specific library instruction to classes upon request by a faculty member.

Several academic support services are located in the library: the CMU Writing Center, the Mathematics Assistance Center, Student Disabilities Services, the Faculty Center for Innovative Teaching, and the Test Proctoring Center.

Hours of service are posted at entrances to the library, online at https://library.cmich.edu/library/hours/, or call 989-774-3294 to hear the current library hours. For more information, call 989-774-1100.

Clarke Historical Library

The Clarke Historical Library collects print and manuscript items regarding Michigan and the Old Northwest Territory. The Library’s holdings are extensive. Over 76,000 printed items, 3,570 manuscript collections, 11,000 reels of microfilm, 16,000 visual images, and 2,300 maps document 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, Native American material, the Central Michigan University archives, and the Wilbert Wright Collection of Africana and Afro-American. Because of the uniqueness of much of the material in the Clarke Historical Library, items in the Library are not available for circulation but must be consulted in the Clarke Historical Library’s reading room located in 142 Park Library. Hours of service are posted, but patrons may dial 774-3352 for Library hours or 774-3864 for reference assistance.

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.

Office of Information Technology

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 provides 5GB of network-based storage (U:Drives) to students, faculty, and staff, with additional storage options available through CMail and SharePoint.
• 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.

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.

CentralLink: Central Michigan University offers a web portal located at: https://centrallink.cmich.edu. 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, 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: CMU has implemented measures to enhance communication in the event of an emergency. Students, faculty, and staff can register to receive phone calls, text messages, or alternative email address alerts through CMU’s Central Alert system. Registration for this system is accessed by going to https://centrallink.cmich.edu and accessing My Account and going to “My Profile.”
Cellular Phone Services: OIT offers Verizon, AT&T, and Sprint cellular phone service and equipment through the Telecom Service Center. Competitive rates are available to all students, faculty, and staff. For information, contact the Telecom Service Center at 989-774-3087, or visit or visit [http://connect.cmich.edu](http://connect.cmich.edu).

Media Services: A large collection of Mediated Equipment is available for use in CMU classes, and are also available for checkout by students. Media consultation and A/V equipment maintenance are also available. Contact Media Services at 989-774-3891.

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 [http://purchasing.cmich.edu](http://purchasing.cmich.edu) and choose “purchasing” from the menu on the right.

Public Computer Labs: State of the art instructional and student technology labs are strategically located throughout the campus to provide easy access for students and faculty. Many of the instructional and student labs operate extended daily hours and weekends. Find out more by visiting [http://labs.cmich.edu](http://labs.cmich.edu).

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](http://it.cmich.edu)). The policies are intended to supplement other existing university and external policies, regulations and laws.

For more information, call the OIT Help Desk at 989-774-3662 or visit [http://it.cmich.edu](http://it.cmich.edu).

Office of Student Affairs
Tony Voisin, Associate Vice President for Student Affairs
Ronan Hall 290; 989-774-3346; [https://www.cmich.edu/ess/studentaffairs/Pages/default.aspx](https://www.cmich.edu/ess/studentaffairs/Pages/default.aspx)

The Office of 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 at Central Michigan University. Students may contact the Office of Student Affairs for assistance with courtesy notifications to instructors regarding extended absence from campus due to illness or other personal issues.

Office of Student Activities and Involvement

Students connect with many aspects of university life through the Office of Student Activities and Involvement. Students may contact the Office of Student Activities and Involvement for assistance with courtesy notifications to instructors regarding extended absence from campus due to illness or other personal issues.

Student Activities and Organizations. CMU provides students with opportunities to become involved in hundreds of 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. Fraternities and sororities exist on CMU's campus to provide opportunities for social and service experiences. Additionally, each residence hall has a hall council or association that provides programs or events for residents of a respective hall.

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 his or her 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). SOC is located on the lower level of the Bovee University Center, houses about thirty student organization offices. Among the major groups with offices in and near the SOC are: Student Government Association, International Club, Organization for Black Unity (OBU), Hispanic Student Organization (HSO), Residence Hall Assembly (RHA), Mortar Board, and the Interfraternity Council, Panhellenic Council, and National Panhellenic Council, which govern fraternities and sororities.

Students interested in participating in campus activities should contact the Office of Student Activities and Involvement. Assistance will be given to students who are interested in starting a new group. The office is located in the Bovee University Center. See [http://cmich.orgsync.com/home](http://cmich.orgsync.com/home) for more information.

Program Board. Program Board is a student committee which reports to the Office of 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.

Office of 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 the lower level of the Bovee University Center, 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.

University Policy for Student Conduct. The university's philosophy of a student's relationship to CMU is expressed in the Code of Students Rights, Responsibilities, and Disciplinary Procedures (see Appendix 1).

Anyone wishing to use the procedures or who has questions concerning them should contact the Conduct Proceedings Officer, Office of Student Conduct, who administers the policies and procedures.

Sexual Aggression Services
The Sexual Aggression Services Director, through the Office of 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/ess/studentaffairs/SAPA/Pages/default.aspx](https://www.cmich.edu/ess/studentaffairs/SAPA/Pages/default.aspx).
General Information

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 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, Elliott-Larsen Civil Rights Act and other relevant state and federal statutes. 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 CMU’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); https://www.cmich.edu/office_president/OCRIE/Pages/Contact_Information.aspx.

NonDiscrimination Policy
CMU’s NonDiscrimination Policy and Equal Opportunity and Affirmative Action Protocol prohibit acts of discrimination or harassment on the basis of age, color, disability, gender, gender identity/ gender expression; genetic information; familial status; height, marital status, national origin, political persuasion, race, religion, sex, sexual orientation, 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 complaint 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 (see above). To view the Board of Trustees Nondiscrimination Policy, see https://www.cmich.edu/office_president/OCRIE/Pages/Nondiscrimination-Statement.aspx. To view CMU’s Equal Opportunity and Affirmative Action Protocol, see https://www.cmich.edu/office_president/OCRIE/Pages/Equal_Opportunity_and_Affirmative_Action_Protocol.aspx.

Sexual Misconduct Policy
CMU’s Sexual Misconduct Policy prohibits sexual 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, except those named as a confidential resource in the Sexual Misconduct policy, are responsible employees who are required, under CMU’s policies, to report any information they know about possible sexual misconduct to the CMU Title IX Coordinator. Individuals who do not want their concerns reported to the Title IX Coordinator may contact confidential resources identified in the Sexual Misconduct policy, such as the CMU Sexual Aggression Peer Advocates or the CMU Counseling Center. To file a complaint of sexual misconduct or to learn more information about the policy, contact the Director of the Office of Civil Rights and Institutional Equity, who is the Title IX Coordinator for CMU. To view CMU’s Sexual Misconduct Policy, see https://www.cmich.edu/office_president/ocrie/documents/Sexual-misconduct-policy-w-appendices-webcopy.pdf.

Student Ombuds Office
989-774-3010; ombuds@cmich.edu
The Student Ombuds Office is part of the office of the Vice President for Enrollment and Student Services and is a place for student voices to be heard. When your problem does not have a simple solution, it may be difficult finding someone who can help. Most of the time, your problem can be handled through normal academic or administrative channels. Academic advisors, department heads and deans can help you resolve problems that occur. Sometimes you may not know what the “normal” administrative channel is. This is where the Student Ombuds Office can help. The Ombuds Office will listen to your situation and may take one or several courses of action: 1) explain the process you might follow to resolve your situation; 2) refer you to the appropriate person who can help you; and/or 3) informally look into your situation and make recommendations. Online: https://www.cmich.edu/ess/ombuds/Pages/contact.aspx.

Student Disability Services
Central Michigan University is committed to providing equal opportunities for success to students with disabilities. Student Disability Services offers support for students with disabilities. Services are available to assist students in their effort to learn and grow from their college experience. Students with disabilities are urged to register with Student Disability Services. For more information about facilities and services for students with disabilities, contact Student Disability Services, 120 Park, 774-3018; https://www.cmich.edu/ess/studentfairs/SDS/Pages/default.aspx.

Career Services
Career Services is located in Ronan 240 and can be reached at 989-774-3068 or careers@cmich.edu. Career Services works with students and graduates on career advising and job search strategies. The office helps students who are seeking advice on their career path along with helping to develop job-seeking skills, writing resumes, and interviewing techniques. An extensive career website is provided for use by all main campus students and alumni. The website contains general career information, tips for seeking jobs, and Handshake for managing your job search, seeking employment opportunities and networking.

The center also coordinates recruiting on CMU’s main campus by businesses, government agencies, and educational institutions and serves as a clearinghouse for employment opportunities. For more information, see https://www.cmich.edu/ess/academicadvisinggassandra/career_services/Pages/Default.aspx.

Computer-based Testing Center
The Computer-based Testing Center provides testing services for students. This includes graduate entrance examinations, such as the Graduate Record Examination (GRE), Miller’s Analogies Test, and Graduate Management Admissions Test (GMAT). Call 989-774-1092 for additional information or visit the website at https://centrallink.cmich.edu/Pages/default.aspx and search on CBTC.

Residence Life
Graduate students may live in housing of their own choice. CMU does offer a variety of housing accommodations with or without meal plans for single students or students with families.

Main campus university-owned apartment housing is available for graduate students: single or married, with or without children. Residence Life staff will identify a roommate for those who wish to share an apartment but do not have a particular person in mind. In order to create a community of graduate students, the Office of Residence Life, when possible, places graduate students residing in university-owned apartments in close proximity to one another. Rates for the 2014-15 academic year may be found at www.reslife.cmich.edu or by contacting Residence Life at 989-774-3111 or reslife@cmich.edu.

One, two, three, and four-bedroom university family apartments are assigned according to date of application for apartment housing. Most units are furnished.
Child Care Options
The Child Development and Learning Laboratory, through the Department of Human Environmental Studies, offers several options. For more information please call 989-774-3760 or visit www.cmich.edu and search for Child Development and Learning.

The Student Employment Office (989-774-3881) assists in finding qualified students for at-home child care. There are a variety of home and center based child care options in the community. For information concerning child care in Clare, Gladwin, Gratiot, and Isabella Counties, see http://greatstartforkids.org/connect/.

University Health Services
Emergencies: Dial 911 on campus for CMU police and ambulance assistance. Care for life threatening emergencies is provided by the McLaren Central Michigan Hospital.

Mission: The mission of University Health Services is to focus on improving the health and wellness of CMU students and the University community by providing personalized medical care, disease prevention and health promotion services tailored to their dynamic needs.

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 University Health Services.

Location and Parking: University Health Services is located in Foust Hall at the corner of Preston Street and East Campus Drive, and offers easy access to services. Free parking for UHS patients is available at designated signs in Lot 29 on the east end of Foust Hall. Parking is also available in Lot 33 on the south side of Foust and metered parking is located in Lot 28 at the west end of Foust. There are automatic doors at the north and west entrances.

Clinic Hours: There are two locations for your health care needs:
- Campus Health Clinic is located in 200 Foust Hall and is open Monday-Friday from 8:00 a.m. to 5:00 p.m. To schedule an appointment (same day or future appointment) call 989-774-6599. A registered nurse is also available at 989-774-6599 to answer questions about health-related concerns, including the quickest and most appropriate way to obtain care.
- Towers Health Clinic is located in 103 Troutman Hall. This satellite clinic operates on a walk-in basis for urgent care needs and is normally open Monday – Thursday from 12:30 p.m. to 4:30 p.m.

Clinical Services Available: Our staff consists of physicians, physician assistants and nurse practitioners who are all board-certified and are fully qualified to provide primary care services. Our medical staff is here to help you get the treatment you need when you need it. We’ll work with your family doctor or specialist as necessary.

Our emphasis is on educating the student to become an informed health care consumer as well as an active partner in their treatment plan, and on supporting healthy decision making. Services include the diagnosis and treatment of the following:
- Illnesses (sore throat, flu, infections, etc.)
- Injuries (sprains, cuts or wounds, etc.)
- Immunizations
- Travel health clinic: before traveling abroad
- Physical exams
- Anxiety, depression, sleep disturbances management
- Allergy shots
- Acute and chronic care management
- Laboratory testing
- Prescriptions
- Sexual health services: such as gynecological exams, birth control, pregnancy testing and sexually transmitted infection testing

There is a laboratory and pharmacy on site. Both accept orders from outside providers. X-rays and other diagnostic imaging services are available through an agreement with a local radiology clinic. Some services are available at Foust location only.

Clinical Services Not Available: major or elective surgery; hospital inpatient care; emergency room care for life-threatening injuries and illnesses; obstetrical care; physical therapy; fitting of glasses or vision care; and dental care are not provided. Referrals to specialists and other health care providers are arranged as needed.

Health Education Services Available: A Health Educator is available to assist with programs and to act as a resource for students. RAs, MA’s and other students may request presentations on various health topics by visiting the Health Services website and clicking on the “request presentation” link. Emphasis is on creating and maintaining an environment that fosters healthy decision making and lifestyles. Self-ordered HIV testing and light therapy appointments are also available. Check out our Facebook page and website regularly for information on our free monthly educational health and wellness presentations.

Payment: There are fees for the care provided, but payment is not required on the date of service. The charges may be paid by cash, check, money order, credit or debit card in the Business Office within three business days or be placed on the student’s personal CMU account and paid by the statement due date. If the student provides proof of current health insurance coverage (a health insurance card or photocopy of it) and signs an authorization permitting Health Services to bill the health plan for the services, insurance billing is provided. The student remains responsible for payment of any co-pays, deductibles and non-covered services. Health Services participates with a number of health insurance and prescription drug plans. For additional information, contact the Business Office at 989-774-6599.

Student Health Insurance: It is highly recommended that all CMU students carry health insurance coverage. While college students are generally a healthy population, an accident or serious illness can happen to anyone at any time and can result in a significant financial burden. Insurance helps protect the student’s physical and financial health.

The student should carry their health insurance card or a photocopy of it and have at least a basic understanding of how the plan works, e.g., benefits, exclusions, pre-authorization requirements, co-pays and deductibles. A national health insurance provider offers and administers a health insurance plan for CMU students, their spouses and dependents at a very competitive cost. Plan benefits, premium costs, enrollment deadlines and application forms are available at the Health Services Business Office.

Medical Records: Medical records are maintained for students and other authorized users of University Health Services. At age eighteen, students are legally adults. The information in their medical record is confidential and will not be released to anyone without the student’s knowledge and written authorization, except as required or permitted by law. Students are asked to complete a pre-entrance health history report and pre-matriculation immunization record to provide a baseline of important health information to help assure safe, effective, and appropriate care when the student is seen at Health Services or in the event of a medical emergency.

Concerns, Comments, Suggestions: University Health Services seeks to continually improve services. Feedback from CMU students is valuable in that process. Concerns, comments 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 contacting the Director by calling 989-774-6599 or sending an email to healthservices@cmich.edu. Referrals to specialists and other health care providers are arranged as needed.

Additional Information: For additional information about University Health Services visit the UHS website at www.healthservices.cmich.edu.
Counseling Center
Ross Rapaport, Director
Michelle Bigard, Associate Director
Foust Hall Suite 102, 989-774-3381

To make an appointment, call 989-774-3381. Hours are 8:00 a.m. to 5:00 p.m. Monday – Friday Fall and Spring Semesters including the week before each semester. At other times when the university is open hours are 8:00 a.m. to noon and 1:00 p.m. to 5:00 p.m. The Counseling Center’s website (www.counsel.cmich.edu) provides information on center services and counselors, current student support groups, community resources, confidential on-line mental health screening, emergency services and links to a wide variety of mental health and related information. Counseling Center faculty includes licensed professional counselors, psychologists, and social workers. On occasion, trainees who are advanced graduate students in various counseling related graduate programs may also provide counseling services. Call or stop by Foust 102 to schedule an appointment with a counselor. Daily urgent and emergency appointment times are available. Please tell our receptionist if you need to see a counselor the same day you are calling. In these situations, contact the center as early in the day as possible.

The Counseling Center provides free and confidential personal counseling services for currently enrolled CMU students for various issues and concerns that may negatively impact one’s academic success, interpersonal relationships, health or safety. Services include: short-term/time-limited individual and group counseling, consultation and referral for: 1) dealing with personal issues such as an urgent situation or crisis, anxiety, depression, loneliness, transition to college concerns, identity, alcohol/drug abuse, eating concerns, stress management, relationship concerns, couples concerns, family stress, loss, relapse prevention, sexual orientation, strengthening coping skills, and personal growth and development; 2) improving academic success by reducing stress and focused anxiety (e.g., test, math, speech), and learning time management skills; and 3) assisting primary and secondary survivors of sexual and domestic violence, stalking, and harassment. Group services are designed to address many topics and vary depending upon student needs from semester to semester.

Other Counseling Center services include providing consultation and referral information for students, parents, faculty and staff; groups and workshops; limited in-service training; limited outreach programs; referral to on and off-campus agencies and services; providing a supervised practicum or internship site for psychology, counselor education and social work students; and selected mental health screening. During the academic year counselors are on-call after hours and weekends to assist students and CMU faculty and staff when there are urgent / emergency student mental health concerns. Call CMU Police at 989-774-3081 to contact the on-call counselor. There is no charge for counseling, consultation and related services.

Residence Life Counselors in Residence
Counseling assistance may also be obtained through Counselors in Residence who work in offices at various residence hall locations. Counselors in Residence may be contacted in the:
- East Area Student Success Center (989-774-1879)
- North Area Student Success Center (989-774-3947)
- South Area Student Success Center (989-774-3089)
- Towers Student Success Center (989-774-6601)

Sponsored by the Office of Residence Life, the Counselors in Residence program places licensed professional counselors and/or social workers 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.

Center for Community Counseling and Development

The Center for Community Counseling and Development provides counseling and assessment services for community residents and schools and CMU students. Advanced graduate students in counseling ordinarily perform these services under the supervision of the counselor education faculty members. Some 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 Center for Community Counseling and Development is administered by the Department of Counseling and Special Education and may be reached at 774-3532; 322 EHS Building.

Psychological Training and Consultation Center

The Psychological Training and Consultation Center (PTCC) is a CMU training clinic which offers low cost psychological services, including psychotherapy and psychological assessment, to CMU students and community residents. Services are provided by CMU Psychology graduate students who are training at PTCC, and they are supervised by Psychology Department faculty. In addition, specialty services are offered through PTCC, including the Violence Reduction Treatment Program, Parent-Child Interaction Therapy, Trauma and Anxiety Disorders Clinic, Neuropsychological Assessment Clinic, School Psychology Specialty Clinic, and the Learning Acceleration Program. For further information about any PTCC program, or to request services, call 989-774-3147.

Speech, Language, and Hearing Clinics

The Speech, Language and Hearing Clinics are operated by the Department of Communication Disorders at CMU and at facilities in the Central Michigan area. These clinics are part of the Carls Center for Clinical Care and Education and 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, a five-week coeducational specialty program is offered 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 clinic has served thousands of children. Enrollment in this clinic is approximately 75 children each summer. The staff includes university faculty; practicing speech, language, and hearing professionals; graduate students; and selected undergraduates.

The Department of Communication 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.
Student Enrichment

Brooks Astronomical 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/colleges/cst/physics/Pages/Brooks-Astronomical-Observatory.aspx.

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 MU camping area, 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 or see https://www.cmich.edu/colleges/cst/cmuibs/Pages/default.aspx.

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 home for the Museum Studies minor program.

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, see www.cmich.edu/academics/humanities_social_behavioral_sciences/CHSBSMuseumofCulturalandNaturalHistory/, or call 989-774-3829.

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 www.cmich.edu/academics/comm_finearts/CCFAArtGallery.

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 www.cmich.edu/about/leadership/finance_admin_services/university_events/ticket_central/

Student Media

Student Publications
Moore Hall 436
989/774-3493
Fax: 989/774-7805
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 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 Central Review is a literary journal publishing poetry, fiction, nonfiction, and visual art by Central Michigan University undergraduate and graduate students. It is edited and produced once per academic semester by Student Publications under the direction of the Student Publication Board of Directors. The magazine’s website is www.centralreviewmagazine.org.

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.

(continued)
Auxiliary Services

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 Services Court, the Campus ID Office, the Office of Student Activities and Involvement, the Office of Student Conduct, Student Employment Services, the Volunteer Center, and the Center for Inclusion and Diversity. Also housed there are the Student Government Association, Program Board and many other student organizations. Several retail operations are provided, such as the Bookstore, which carries a full line of required class materials, supplies, clothing, and gift items; Independent Bank; MEDIAgraphix, and a copy center.

Complete food service operations are offered, including the Down Under Food Court (open Monday-Friday) and Quiznos® Subs, Freshens EnergyZone smoothies, Pretzel Logic, and Starbucks Coffee.

Printing Services

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://centrallink.cmich.edu/services/business_facilityservices/printing.

Graduate students may also live in residence halls. Residence halls provide several lifestyle options, as well as many amenities including fitness areas, Student Success Centers, study lounges, and computer labs.

Room and board rates vary depending on the meal plan chosen. See the Campus Dining website for more information concerning meal plans. All students residing on- or off-campus are eligible for residence hall meal options. Several areas in the Bovee University Center serve meals on a daily basis.

Application for all university housing should be made well in advance. Questions concerning available housing and board arrangements should be addressed to the Office of Residence Life, Ronan Hall, Room 270, Central Michigan University, Mt. Pleasant, MI, 48859-0001; 989-774-3111; reslife@cmich.edu.
Development and External Relations

Kathleen M. Wilbur, Vice President
Carlin Alumni House; 989-774-2382

Development

Development serves as the administrative home of the CMU Alumni Association and generates private gift revenues from individuals, corporations and foundations in order to accomplish the purposes and objectives of Central Michigan University. In pursuit of its mission, Development provides fundraising leadership to complement, encourage, and support university-wide efforts to achieve comprehensive objectives for resource acquisition. At the same time, Development 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 Vice President of Development and External Relations at 989-774-2382.

Alumni Relations

The Alumni Relations Office exists to perpetuate and enhance the lifelong relationship between the university and its graduates. The office develops multiple avenues to involve graduates and current students with CMU in a productive and positive manner.

Alumni are encouraged to return to campus and participate in traditional campus activities such as Homecoming and Alumni Reunion Weekend. Additionally, we encourage CMU alumni to get involved in their local Alumni Association chapters and clubs.

The Alumni Office helps foster a sense of spirit and pride in Central Michigan University students through the Student 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, four 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 200,000 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.

Governmental 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 Governmental Relations Office at 989-774-3871.

Public Broadcasting

CMU operates the largest university-owned public broadcasting network in the United States. With five television and seven radio stations, CMU Public Broadcasting is one of the university’s primary public service initiatives.

Television. CMU owns and operates public television station WCMU-TV, channel 14, Mt. Pleasant; WCML-TV, channel 6, Alpena; WCMW-TV, channel 21, Manistee/Ludington; and WCMV-TV, channel 27, Cadillac, and WCMZ-TV, channel 26, Flint. CMU Public Television broadcasts 24 hours per day, the year around, servicing a potential audience of over 5 million people. The stations are also on cable systems throughout the state.

Radio. CMU Public Radio operates seven transmitters serving central and northern Michigan, and portions of Ontario, Canada. These include: WCMU-FM (89.5 MHz) from Mt. Pleasant; WCMJ-FM (91.7 MHz) from Alpena; WCMB-FM (95.7 MHz) from Oscoda; WWCM (96.9) from Standish; WUX-FM (90.1 MHz) from Bay City; WCMZ-FM (98.3 MHz) from Sault Ste. Marie; and WCMW-FM (103.9 MHz) from Harbor Springs. The stations broadcast programming of an informational and cultural nature 24 hours a day, 365 days a year. The broadcast schedule includes NPR news, classical and traditional music, jazz, opera, and radio drama.

CMU Public Television and Radio are staffed by professional personnel, as well as by students seeking a practical background in broadcasting. The network is affiliated with the Public Broadcasting Service and National Public Radio. It is located in the Public Broadcasting Center on the corner of Mission and Broomfield.

University Communications

Sherry Knight, Associate Vice President
West 202; 989-774-3197

University Communications serves as the official voice of Central Michigan University and promotes the university through strategic messaging using digital, print, video and multimedia communications. Engaging in ongoing collaborative relationships with other university partners, including colleges, programs and organizations, UComm offers a full complement of award-winning publication services, media tools and data-driven marketing strategies. UComm works with university entities to develop communication and marketing projects that advance CMU’s goals, mission and national reputation.

UComm promotes the activities of the university community, such as scholarly achievements, groundbreaking research and public service initiatives, to broad audiences across the state, region and world. It is a primary point of contact for members of the news media requesting interviews with university personnel or seeking information about administrative, academic or student matters. UComm also provides creative consultation and production coordination to assist CMU faculty and staff.
Admission and Special Admission Considerations

This section describes the university's policies and procedures that affect graduate students and graduate 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 this Graduate 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.

Admission

College of Medicine Admission

Admission applications to the College of Medicine are completed through the American Medical College Application Service (AMCAS) at www.aamc.org/students/amcas. Additional information about the College of Medicine application requirements is available on the College of Medicine website www.cmich.edu/med. The admission office email address is cmedadmit@cmich.edu.

Applying for Admission to Graduate Study

1. Graduate Application. Complete the online graduate application (apply.cmich.edu) or submit the application for admission located in the front of this Bulletin. Printed applications must be signed; unsigned applications are not processed.

2. Application Fee. Applications are not processed without payment of the application fee. If you have already received a graduate degree or certificate and are applying to another graduate program/certificate or if you were denied admission to a graduate program/certificate and you are reapplying or applying to a different graduate program you must submit another application fee.

3. Official Transcripts. All transcripts and diploma copies become the property of CMU. All applicants must hold a baccalaureate or equivalent degree from a regionally accredited U.S. college or university (accredited at the time the student attended), or in the case of institutions outside the U.S. a degree from an institution recognized by the government of that country at the time of attendance.
   - Arrange for one official copy of all undergraduate and graduate transcripts to be sent directly to Graduate Student Services from the Registrar’s Office of each college or university attended (except CMU).
   - International applicants: Must submit a copy of all diploma(s).

4. Statement of Purpose. A brief, one-page statement describing your purpose and general plan for graduate study at Central Michigan University. The statement should include information about your future career plans, or any past or current activities or achievements which are related to your proposed field of specialization including any research or teaching experience you may have had.


NOTE: Students applying for fellowship must submit Graduate Record Examination (GRE) test scores.

Application Deadlines and Processing Time

Applying.

- Domestic applicants: apply 6 weeks prior to the registration period for the semester they plan to enroll.
- International applicants: students living within the United States should apply 6 weeks prior to the registration period for the semester they plan to enroll. Students outside the United States should apply 6-12 months prior to the registration period for the semester they plan to enroll.
- Non-degree seeking domestic applicants: apply 2 weeks prior to the registration period for the semester they plan to enroll. See Non-Degree Admission under Types of Admission for information and restrictions.

Decision Timeframe. Arrange for one official copy of all undergraduate and graduate transcripts to be sent directly to Graduate Student Services from the Registrar’s Office of each college or university attended (except CMU).

Applicants are normally notified of an admission decision six weeks after the completed application, fee, and supporting documentation (including any required by the department) are received. If any portion of the required or department supplementary materials are delayed, the process can take longer. Students who have not received an admission decision six weeks after their complete admission file is received should contact Graduate Student Services (989-774-GRAD) for assistance.

Application Deadlines. Some departments have application deadlines and consider all graduate applications after a certain date.

Requirements may change, so all applicants, regardless of their field of specialization, should contact their specific departments to find out what, if any, application deadlines may exist.

CAUTION: Before coursework may be started, a student must apply for and be admitted to a program or be admitted as a non-degree/ certificate student. Courses taken as a non-degree student may or may not be counted toward a graduate degree program. (See section titled “Types of Admission”)

Certification of Admission

The Office of Research and Graduate Studies alone determines non-degree admission. Admission to a degree or certificate granting program is always contingent upon departmental approval. Only the Office of Research and Graduate Studies has the authority to admit graduate students. Department and programs recommend admission or denial. The Office of Research and Graduate Studies issues the final decision. Using the department’s admission or denial recommendation, the Office of Research and Graduate Studies either denies admission or sends the student an official Certificate of Admission indicating the student’s admission status (regular, conditional, non-degree, provisional, or concurrent) as well as other pertinent information. The Certificate of Admission is valid for one calendar year following the effective admission date. If a student does not enroll in courses within one calendar year after being admitted for graduate study, the student is required to reapply for admission.

Types of Admission

CMU has five categories of admission: regular, conditional, non-degree, provisional, or concurrent (as a CMU graduating senior). A Letter of Admission is valid for one calendar year following the effective admission date. If a student does not enroll in courses within one calendar year after being admitted for graduate study, the student is required to reapply for admission.

Graduate applicants should be aware that concentrations in some disciplines may be open only to full-time, main campus students. Graduate applicants that cannot attend full-time should check with their department before seeking admission to a concentration in that department. NOTE: International students are required by law to be enrolled full-time.

All references to grade points and grade point averages (GPA) are based on a four-point scale. (The adaptation of this scale to the graduate school marking system at Central Michigan University is found under Academic Regulations.)

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Baccalaureate Degree Requirements. All applicants must hold a baccalaureate or equivalent degree from a regionally accredited U.S. college of university (accredited at the time the student attended), or in the case of institutions outside the U.S. a degree from an institution recognized by the government of that country at the time of attendance.

Department Requirements. All applicants must meet the admission requirements of the department in which they wish to complete their graduate degree or certificate.

1. Regular Admission

Requires at least a 2.7 cumulative, undergraduate GPA, or a 3.0 cumulative, undergraduate GPA in the final sixty semester hours of graded coursework toward a bachelor’s degree. At least 60 hours of undergraduate coursework must be graded.

2. Conditional Admission

Conditional admission may be granted to students who do not meet all the requirements for regular admission or whose personal competencies a department may wish to assess prior to recommending regular admission. Departments or the Office of Research and Graduate Studies may require that the student be conditionally admitted with the requirement that he/she makes up the deficiencies and maintains an acceptable level of scholarship in graded graduate coursework. Courses taken to make up deficiencies in preparation for regular admission may not be counted toward graduate degree/certificate requirements. Conditional admission to graduate study, even when accompanied by assignment to an academic advisor, does not constitute final admission. Students are considered admitted only when regular admission status has been granted.

Students granted conditional admission are only considered to be regularly admitted to a specific curriculum when they have:

a. fulfilled all the prerequisites for admission to the curriculum;

b. submitted a completed Admission Status Reclassification Petition form with required signatures to the Office of Research and Graduate Studies;

c. submitted an Authorization for Degree Program – Graduate or Doctoral form approved and signed by the appropriate personnel.

3. Non-Degree Admission

Non-degree admission status is meant for applicants who: 1) are undecided as to curriculum choice, or 2) do not wish to earn a degree or certificate, or 3) do not meet the requirements for regular or conditional admission.

Coursework Restrictions:

- Students admitted as non-degree may register only for courses for which they meet the prerequisites.
- Students may enroll in an unlimited number of courses while having non-degree status however, dependent on graduate program/department approval a maximum of nine graduate credits may be applied toward a graduate degree or a maximum of six graduate credits may be applied toward a certificate. Departments may approve a higher or lower limit with Office of Research and Graduate Studies approval.
- Graduate credits used to make up deficiencies in program preparation cannot be counted toward a degree or certificate. Students should contact the department chairperson or graduate coordinator in their proposed field of study for assistance in selecting coursework to make up deficiencies.
- Students must maintain the required cumulative graduate GPA of 3.0.

Re-evaluation for Regular or Conditional Admission. The time frame varies for non-degree students who wish to apply for conditional or regular admission. Students admitted to non-degree status because of failure to meet the requirements for conditional or regular admission may apply for admission once they have met the requirements to the satisfaction of the department which offers the program and the Office of Research and Graduate Studies. Undecided students who do not have coursework deficiencies may apply for admission to a degree or certificate program at any time.

(continued)
Non-degree students who apply for regular or conditional admission will be evaluated as all applicants are evaluated and the admission decision will be communicated to the student by Graduate Student Services.

Students wishing to change from non-degree to regular or conditional admission status must complete another admission application. However, no fee is required if the student paid the application fee when applying for non-degree status.

**International applicants**. International applicants holding a J-1 (exchange) visa may be allowed non-degree status. Only in unusual and rare circumstances may international students holding an F-1 (student) visa be granted non-degree status.

### 4. Provisional Admission

Provisional Admission is typically granted to 1) Students in the final semester of completing their bachelor’s degree with the understanding that they will complete the baccalaureate prior to beginning their graduate studies or 2) Students who in rare circumstances submit an unofficial transcript or test scores pending receipt of official documents. Provisional admission is granted to these students in combination with another admission status (regular, conditional, and non-degree) contingent upon providing Graduate Student Services with the required information.

Students with provisional admission may only register for one semester of graduate coursework while awaiting the official documentation. It is the student’s responsibility to request the registrar at the baccalaureate granting college or university to send an official copy of the final transcript reflecting the degree earned or for official test scores to be sent directly from the testing organization to Graduate Student Services. A final decision relative to the applicant’s admission will be made and the student will be notified of the decision. If the student fails to submit the required documentation the admission will be converted to a denial and the student will be removed from classes.

### 5. Concurrent Admission as a Graduating Senior

An undergraduate student may be permitted to register concurrently for graduate credit for the semester or summer session in which requirements will be completed for a baccalaureate degree, provided that the following conditions are met: 1) the student will be enrolled in a maximum of 12 undergraduate credits during the semester of concurrent registration; 2) during the semester of concurrent registration, the student enrolls in all remaining courses required for graduation; 3) during the semester of concurrent registration the student total credit load (undergraduate and graduate) will not exceed 15 credit hours; 4) the student has an undergraduate GPA of at least 2.7 or a 3.0 in the last 60 semester hours of graded coursework toward the bachelor's degree; and 5) only 500-level coursework is eligible for concurrent enrollment; and 6) the student is admitted to Graduate Studies (conditional or non-degree status). Students who do not comply with the conditions of concurrent admission may be dropped from their graduate courses. Students who fail to earn their baccalaureate degree at the end of the concurrently-enrolled semester will have their admission be converted to a denial and the student will be removed from classes. Students who have completed all requirements for the bachelor’s degree EXCEPT for student teaching may be granted concurrent status prior to student teaching if they meet conditions 4 and 6 above. Exceptions to the policy may be granted under any of the following circumstances:

- a. Students who have completed all requirements for the bachelor’s degree EXCEPT student teaching may be granted concurrent status prior to student teaching if they meet conditions 4 and 6 above;
- b. Students admitted to an accelerated master's degree program at CMU may be granted concurrent status if they have completed at least 86 undergraduate credit hours and satisfy condition 4 above;
- c. Exceptions may be granted by the Vice President/Dean of the Office of Research and Graduate Studies.

### Special Admission Considerations

#### International Student Admission

International applications for admission require longer processing time than other applications. Prospective students should be certain to allow ample time for documents to be sent to Graduate Student Services and should recognize that notice of admission may take longer than expected to reach them. Also, certain programs have application deadlines, usually early in the year, and this should be taken into consideration when applying for admission.

#### Guidelines for International Applicants

1. International applicants: students living within the United States should apply 6 weeks prior to the registration period for the semester they plan to enroll. Students outside the United States should apply 6-12 months prior to the registration period for the semester they plan to enroll. Applications will be accepted after this date, but admission and the issue of an I-20 for international students who are outside the United States is not guaranteed in time to begin classes. An applicant who is a citizen of a country other than the United States must submit an International Graduate Student Application for Admission along with the required application fee. (U.S. citizens and international applicants who are permanent residents of the U.S. should submit a Domestic Application for Admission.) At the same time, the applicant must submit directly to Graduate Student Services one official copy of all diplomas and transcripts, as well as corresponding official English translations of non-English documents, from all post-secondary institutions attended. All transcripts and diploma copies become the property of CMU.

2. Many international students inquire about obtaining financial aid to assist with the expenses of a degree program. There is very little financial aid available to international students in the United States; most aid derives from U.S. government sources and is restricted to U.S. citizens and permanent residents. A condition of acceptance for international students is that they provide evidence of their ability to pay all tuition and living expenses for each year of your degree program when applying for graduate study. The cost of one academic year (nine months) is available on the Office of Research and Graduate Studies website. These figures do not include initial travel expenses or any summer expenses, including tuition, fees, or living expenses. Proof of funding consists of a completed Financial Support Form and an original copy of a current bank statement. It is expected that international students will have this support and some students may be expected to pre-pay.

#### 3. English Proficiency Standards

- a. **Test of English as a Foreign Language** (TOEFL): A score of 500 PBT/61 IBT is required for conditional admission or 550 PBT/79 IBT for regular admission.
- b. **International English Language Testing System** (IELTS) Academic Module: A score of 5.5 required for conditional admission or 6.5 for regular admission.
- c. **Pearson Test of English, Academic Module**: A score of 44 for conditional admission or 53 for regular admission.
- d. **International Baccalaureate** (IB): A grade of 5 in English at the Higher Level is required for regular admission.
- e. **Michigan English Language Assessment Battery** (MELAB): A score of 69 is required for conditional admission or 77 for regular admission.
- f. **ELS Language Center Program**: Completion of Level 112 for regular admission.
- g. **ELI (CMU English Language Program)**: Successful ELI completion and recommendations for regular admission.
- h. **English Language Programs**: English Language Programs from outside CMU may be considered on an individual basis.
- i. **English Language of Instruction** (Received Baccalaureate Degree): Applicants for whom English is the language of instruction is English may also qualify for English Proficiency.
j. **English Language Proficiency Testing Exemptions (List of Exempt Countries):** To view a list of English Language Proficiency Testing Exemptions, please go to www.grad.cmich.edu/toefl

4. **Conditional Admission:** Students who are granted conditional admission will be required upon arrival to take an English proficiency test administered by CMU’s English Language Institute (ELI). The results of the test will be used to determine the number of courses they will be required to take through the ELI. Such conditionally admitted students will be allowed to take a restricted number of courses in their academic disciplines concurrently with the ELI courses and must complete all required ELI courses by the end of their first year at CMU. Once satisfactory proficiency in English has been demonstrated, as determined by ELI policies, these restrictions will be removed.

5. **Bridge Admission:** Applicants with no English proficiency scores or whose scores are below the minimum requirements for regular or conditional admission may be admitted as graduate students through the University International Bridge Program. Students admitted to the Bridge Program must take the ELI placement test upon arrival at the University. Based on the results of this test, students may be placed into the Intensive English Program, Dual Program, or no English language classes.

**Admission of CMU Faculty and Staff**

A faculty member, administrator, or staff member at CMU may not be admitted to a graduate degree or certificate program or earn a graduate degree or certificate in a program in his/her own department. A faculty member, administrator, or staff member at CMU may be admitted to a graduate degree or certificate program and earn a graduate degree or certificate in a program in his/her own college, provided that he/she has written permission from the dean of his/her college. The written permission will be retained in the student’s file. A faculty member, administrator, or staff member may be admitted to a degree or certificate program that is outside his/her own college.

A faculty member, administrator, or staff member in Global Campus may pursue a graduate degree or certificate through Global Campus provided that he/she has permission from the Vice President/Dean of the Office of Research and Graduate Studies.

**Admission with Baccalaureate from Schools without Recognized Standing**

An applicant who holds a baccalaureate or equivalent degree from an institution which does not have recognized academic standing may be granted regular or conditional admission to a degree program on the recommendation of the chairperson of the academic department concerned and the concurrence of the Vice President/Dean of the Office of Research and Graduate Studies or, optionally, non-degree admission at the discretion of the Vice President/Dean. Such an admission decision will be based on a careful evaluation of the applicant’s qualifications, acceptable evidence of the institution’s competence in the student’s principal areas of preparation, and other relevant factors. If granted conditional or non-degree admission, the student may be required to complete a number of hours of graduate or upper-level undergraduate qualifying coursework at CMU in the proposed field of study with a grade point average of 3.0 (B) or higher to become eligible to apply for regular admission to a degree or certificate program. An applicant admitted with such a stipulation is advised to consult the chairperson of the department in which he or she wishes to study for help in selecting appropriate qualifying courses. No department, however, is obligated to accept the applicant upon the completion of qualifying coursework if, in its judgment, the applicant is still not appropriately prepared for degree or certificate work. Qualifying coursework clearly stipulated as preparatory to normal degree or certificate requirements may not thereafter be counted toward any graduate degree or certificate program.

**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 as seniors 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. The Accelerated Master’s Degree Program (AMDP) allows students to reduce the total number of credits required to complete their undergraduate and graduate degrees by applying up to twelve 500 and 600-level credit hours (only 6 credits is allowable for MBA) 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 programs.

**Admission Procedures.** Each program will determine admission criteria, which will be at least as rigorous as admission requirements for admission to the master’s program, and procedures for its Accelerated Master’s Degree. Generally, students will apply during their junior year for admission into the Accelerated Master’s Degree Program to begin fall semester of their senior year. In most cases, the baccalaureate degree will be awarded within one year after admission into the Accelerated Master’s Degree Program. Prior to earning the baccalaureate degree, students must earn at least a “B” in each course which applies to the graduate degree; if students do not earn a “B” in each course which applies to graduate degree, the student will be dematriculated from the ADMP. If the student wishes to obtain a graduate degree he/she must apply for readmission into the regular master’s program.

**Military Service Commission**

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

**Global Campus Enrollment**

Students who have been admitted to Graduate Studies may enroll in graduate courses scheduled through Global Campus. Non-degree admission is available for students who wish to take continuing education courses without pursuing a degree or certificate. Courses taken through Global Campus may count toward the satisfaction of requirements in appropriate authorized graduate degree or certificate programs. It is the student’s responsibility to consult his or her advisor to determine which courses will apply in specific programs.

**Note:** International students who are issued an I-20 to pursue graduate studies at CMU are restricted to enrolling in one on-line course per semester. The department chair or graduate program coordinator must approve any coursework done through Global Campus.
Duration of Admission Status: Time for Completion of Degree

After admission to a graduate program of study, students are expected to complete degree or certificate requirements in a responsible and timely manner. For full-time students, two calendar years should be adequate for the completion of most master’s degree programs; five calendar years should be adequate for the complete of most doctoral programs. Part-time students may need a somewhat longer period to meet these requirements, but in all instances, coursework and other requirements must be completed within the following time limitations:

1. Graduate Certificate: within seven years;
2. Master’s or Specialist’s degrees: within seven years;
3. Doctoral Degrees: within eight years if the student had a relevant graduate degree when beginning the program OR within ten years if the student began doctoral study without a relevant prior graduate degree.

Continuous Registration

Any main campus student who has completed all academic coursework except the final project (Plan B project or internship, thesis, doctoral project, dissertation) must be enrolled in at least one CMU graduate credit hour each fall and spring semester until graduation (summer sessions as well if summer course work is normally required in the program). The Continuous Registration for Final Research Project (course 619) within the student’s home department can fulfill this one credit hour requirement.

If, after all academic course work except the final project is completed, a student does not enroll each fall and spring semester (and summer, when appropriate) until graduation, the student must enroll retroactively for each missed semester (including summer, where appropriate) once s/he returns to complete the project. A student may request a leave of absence by submitting a Leave of Absence Request form to Graduate Studies; if approved, continuous registration will be waived during the approved leave period. Regardless of whether the student has a leave of absence, the student must still complete the degree within the time-to-degree limitations set forth under the degree requirements.

Thesis/Doctoral/Dissertation. To be exempt from the 619 continuous enrollment credit, a student must successfully defend his/her thesis/doctoral project/dissertation before the beginning of the semester (defined by the first day of class).

If a student successfully defends his/her thesis/doctoral project/dissertation before the beginning of the semester, he/she will receive “exempt” status for one semester. If the student does not complete the thesis/doctoral project/dissertation project outline by Graduate Studies within that semester, the student will be charged for the 619 continuous enrollment credit each semester until he/she graduates.

Internships. A student completing an internship will be given one academic year beyond his/her internship course to complete his/her internship and graduate. After that year, the student will be charged for the 619 continuous enrollment credit each semester until he/she graduates.

Comprehensive Examinations. A student will be given one semester after his/her comprehensive examination course to take the examination. If the student does not take the comprehensive examination the next semester or fails, he/she must register for 619 continuous enrollment credit until he/she graduates or does not pass the exam.

Extension of Time Requests

Extension of time requests are serious and approval by the advisor and department do not guarantee approval by Graduate Studies. Extension of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically “life” events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. Students must demonstrate the following for their requests to be considered by Graduate Studies: compelling extenuating circumstances, current knowledge in the subject matter they wish to extend, and steady progress toward the certificate or degree. Students that have not been enrolled at CMU for more than two years are not making steady progress. Transfer credit is not eligible for extension consideration. Extension requests are limited to a one time request of twelve to eighteen months. Extension requests are limited to a one time request of twelve to eighteen months total and for up to 9 graduate credit hours. If an extension is granted, a second extension is highly unlikely and students should plan accordingly.

Extension of time request forms are available on the Office of Research and Graduate Studies website www.grad.cmich.edu under New and Current Students: Applications and Academic Forms.

Admission to Graduate Studies is valid for four to ten years (depending on the degree or certificate sought) after the date of first admission, except by cancellation for cause, or by one of the following provisions:

1. Degree or Certificate Recipients. The student’s admission to Graduate Studies is terminated upon completion of all requirements for a degree or certificate. (This provision does not apply to students who earn a master’s degree while enrolled in a doctoral program, or to students who earn a certificate while enrolled in a master’s or doctoral program.) To resume graduate study thereafter on a second degree program or as a non-degree student, the student may apply for readmission by submitting an Application for Admission.
2. Termination of Admission. This policy is explained under the “Duration of Admission Status,” noted above.
3. Inactive Status. If a student does not register for the initial graduate work within one year after the date of admission to Graduate Studies, or if in completing one or more courses the student earns no further graduate credit at this university for three consecutive years, the student is classified as inactive and the admission is terminated. If the student has completed one or more courses, the permanent record card is retained by the Registrar. The student may thereafter apply for readmission to resume graduate study at a later date by submitting an Application for Admission and supplying all other documents requested by the department concerned.

If a student does not earn graduate credit at CMU for seven consecutive years, the student’s original application, letters, transcripts from other universities, and other materials will be destroyed. If one wishes to apply for readmission after that length of time, all materials, including a new application, transcripts and other documents requested by the department will need to be submitted.
Policies and Procedures

Academic Load
Graduate Studies considers the following a normal course load:

- Full-time resident student fall or spring semesters: 9-12 graduate credit hours
- Full-time resident student summer semester: 4-6 graduate credit hours
- Graduate Assistants fall or spring semesters: 6 credit hours
- Graduate Assistants summer semester: 3 credit hours

A graduate student may not enroll for more than 15 graduate credit hours in the fall or spring semester, nor may the student enroll for more than 15 graduate credits in the two summer sessions combined. Exceptions to the limitation are automatic for programs that require more graduate credits in a given semester. Students should check with their department to learn if their department requires additional graduate credit hour registration. Other exceptions require the graduate advisor and the Vice President/Dean of the Office of Research and Graduate Studies.

To qualify for financial benefits as a full-time student under programs of the Veteran’s Administration, and/or to qualify for financial benefits as a full-time student under programs of the Social Security Administration and/or for certain loan agreements, students must carry a minimum of nine credit hours during the fall and/or spring semester. For shorter sessions, contact the financial aid office for information on minimum loads for full-time status.

Unless financial or immigration requirements necessitate defining a minimum number of hours for status as a full-time graduate student, there is no minimum load requirement for graduate studies. It is expected that students will assess need, ability, and other factors judiciously and register for a class load that permits them to maintain academic standards.

In order to use CMU resources (e.g., computers, laboratories, equipment, faculty) during the regular academic year, graduate students must be registered for a minimum of one credit hour.

See “Continuous Registration” in the Index for more information.

Changing Degree Programs
To change graduate programs, the student should send a completed Request for Change of Program form along with the appropriate fee to Graduate Student Services. The request will be reviewed by the new graduate department. Acceptance into one graduate program does not guarantee acceptance into another.

If the program change is approved, the student should meet with the new academic advisor and complete a new Authorization of Degree Program - Graduate or Certificate Program form and submit the completed form to Graduate Student Services.

Recomputing Grade Point Average
A student who transfers from one graduate program to another may file a Recomputation of Grade Point Average Petition. If approved by the advisor and department chair, all courses completed on the original graduate program will be disallowed on the second program plan, all grades on previous course work will be disregarded, and the student will begin the new program with no cumulative grade point average. The Recomputation of Grade Point Average Petition must be filed within one calendar year of beginning the new program.

Note: All courses will still remain on the student’s transcript although the grades will not contribute to the grade point average or degree requirements.

Registration Information and Procedures
Students are eligible to enroll in graduate level courses after they receive their admission letter. Initial registration must occur within one calendar year of the admission date or the student will need to reapply.

Registration is published by the Registrar’s Office (www.cmich.edu/Registrars). Exact dates are listed in the Course Search & Registration.

Graduate students may register any time during the registration period via https://centrallink.cmich.edu. It is recommended that they register during the special computer time reserved for graduate students. The procedures for registration are described in the Class Schedule. However, before registering for courses, students should verify that they meet the prerequisites. This is particularly true for internships, practica, independent studies, and thesis/dissertation credits. CAUTION: Students should always consult their advisors to determine which classes to take.

Note: Occasionally a student who is trying to register is told that there is a “hold” on his or her registration. Students who receive this message should contact Graduate Student Services at 989-774-GRAD to determine the cause of the hold.

Student Photo Identification Card (Campus ID)
Once students have initially registered for courses at Central Michigan University, they will need to get a photo identification card, available from the Campus ID office in Bovee University Center. This campus ID card allows students to use the various student services described in this bulletin. Banking services using the Campus ID card are also available. Contact the Campus ID Office for additional information.

Internships, Practica, Independent Studies, Theses, Doctoral Projects, Dissertations
Students registering for internships, practica, independent studies, theses, doctoral projects, or dissertations should be aware that these courses ordinarily require the permission of the instructor and/or department chairperson prior to registration. Specific registration requirements for each course will appear in the Bulletin description; these requirements must be observed.
In addition, students may NOT enroll for more than three thesis/dissertation credits until the Prospectus and committee composition have been approved at the department level. This is to ensure that if the Prospectus is not approved by the Vice President/Dean of the Office of Research and Graduate Studies that the student has not wasted valuable time, credits, and resources. Projects undertaken prior to the Vice President/Dean of the Office of Research and Graduate Studies approving the Prospectus may be denied and the project deemed invalid.

Auditing Courses

Students who do not wish to take a graduate course for credit may register as an auditor, provided the student has obtained approval from the chairperson of the department prior to registration and is otherwise qualified. To qualify to audit a main campus or Global Campus graduate course, students must meet the usual admission requirements for courses at or above the 600 level. No credit or grade is granted for an audited course, but such credit as the course normally would carry is included as part of a student's total load. No change from regular registration to audit nor from audit to regular registration is permitted after the completion of the Drop and Add period. The student's responsibility to the class being audited is determined by the instructor of the class. Auditors pay the same fees required of students taking the course for credit.

Change of Registration (Drop/Add)

Courses may be dropped using CentralLink with a full cancellation of tuition and fees any time before the course meets a second time. Courses may be added only during registration. Refer to the appropriate Class Schedule for registration dates and procedures.

Withdrawing from a Class After the Drop/Add Period

The following procedures apply to students who desire to withdraw from a class after the official Drop/Add period listed in the Class Schedule.

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.

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, either never attended or the last date attended.

3. Students will receive W's 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 also be sent 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 made, the Registrar shall notify the instructor of this action. The Registrar's actions may be appealed to the Executive Director for Academic Advising and Assistance.

Withdrawals from All Courses

Students may withdraw from all courses through the tenth 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.

Students withdrawing from the university between the tenth week and the Friday of the 14th week 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.

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 Behavioral 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.

Religious Holidays

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.
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 scholastic 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 may be directed to the Office of Student Conduct or the College of Graduate Studies.

2. **Academic dishonesty includes:**

   A. **Cheating on Examinations Definition**

   Cheating is using or attempting to use materials, information, notes, study aids, or other assistance in any type of examination or evaluation which have not been authorized by the instructor.

   **Clarification**

   1. 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.
   2. 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.
   3. 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 purporting 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 acknowledgement of sources. Students must consult with their instructors for clarification in any situation in which the need for documentation is an issue, and will have plagiarized 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.
   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.

   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 legitimate under circumstances explicitly authorized by an instructor.
   2. Students may not furnish to instructors fabricated or forged explanations of absences or of other aspects of their performance and behavior.
   3. Students may not furnish, or attempt to furnish, 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 so as to deprive others of their use.

   D. **Multiple Submission Definition**

   Multiple submission is 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.

(continued)
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 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. This does not apply to examinations that have been administered and returned to students in previous semesters.

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. 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 Rules for Computing and Networking Resources. 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.
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. This can be found under Policies at the following web address: www.orsp.cmich.edu.

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.

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:

- 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 s/he 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).

In addition, instructors are encouraged to report serious incidents of academic misconduct to the Office of Student Conduct or the College of Graduate Studies 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 s/he 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 s/he 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 representative of the Ombuds office or 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 s/he 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 this 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 or the College of Graduate Studies, 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 s/he determines that mitigating factors presented by the student warrant a less serious academic consequence than was reflected in the grade submitted, then s/he 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, s/he forfeits the right to such an appeal.

The appeal must be submitted in writing to the instructor and to the dean (or his/her 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 (continued)
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 academic misconduct occurred, and/or that the instructor abused his or her professional discretion in finding that academic misconduct occurred, and/or that the instructor's selection of academic consequences for the misconduct 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 or the College of Graduate Studies

If the instructor believes that a student has violated the Policy on Academic Integrity and that the violation is sufficiently serious, the instructor may refer the case to the Office of Student Conduct or the College of Graduate Studies 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 or the College of Graduate Studies are being requested.
2. The instructor will forward all documentation supporting the allegation of violation to the Office of Student Conduct or the College of Graduate Studies 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 may be imposed, and the appeal process.
4. The Office of Student Conduct or the College of Graduate Studies 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 or the College of Graduate Studies.

Passed by Academic Senate 05/05/09

Misrepresentation of Affiliation with the University

It is important to Central Michigan University, its students and alumni that academic and co-curricular 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 co-curricular 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 criminal prosecution.
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 his or her 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 email 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, health services, telecom, parking fees and other miscellaneous charges.

Students may incur late fees if the monthly balances is not paid by the scheduled due date. Financial holds will be placed on accounts with a past due preventing course registration and release of transcripts. Monthly late fees will be assessed to the account as follows:

<table>
<thead>
<tr>
<th>Past Due Amount</th>
<th>Late Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.01-$9.99</td>
<td>No late fee</td>
</tr>
<tr>
<td>$10.00-$59.99</td>
<td>$1.00 per month</td>
</tr>
<tr>
<td>$60.00 and above</td>
<td>$30.00 per month</td>
</tr>
</tbody>
</table>

Past due accounts may be referred to a collection agency, and, if referred, the fees assessed to the University by the collection agency will be added to the student’s account. Once the account is referred to a collection agency, the past due account may be reported to the Credit Bureau by the collection agency. Students are encouraged to visit the Student Service Court on the lower level of the Bovee University Center to receive advice regarding financial options which 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 and campus cash, computer lab, library, bookstore, SAC, telecom and health service charges. Any delinquencies from the University Apartments may result in the initiation of eviction proceedings. 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.

**Tuition Rates for Main Campus Credit Courses**

<table>
<thead>
<tr>
<th>Level of Courses</th>
<th>Michigan Residents</th>
<th>Michigan Non-Residents</th>
<th>Non-Michigan Residents</th>
<th>Non-Michigan Non-Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's/Specialist</td>
<td>$527.00</td>
<td>$792.00</td>
<td>$605.00</td>
<td>$875.00</td>
</tr>
</tbody>
</table>

**Application Fees**

Graduate:
- $45.00 for U.S. citizens and resident aliens to be submitted with the application form.
- $60.00 for international students to be submitted with the application form.

**Late Registration Fee**

An additional fee of $100.00 will be charged to all students registering on or after the first day of classes for the semester or session.

**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 $30 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 from the university upon receipt of a returned check.

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.

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 Class Schedule.

Global Campus Classes. For information regarding fees for Global Campus Programs and Educational and Professional Development, please contact the Global Campus Office at 989-774-3865.

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 Environmental Studies, Engineering Technology, and Journalism will be charged for the cost of those materials.

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

Credit by Examination Fee
The credit by examination fee is calculated according to the tuition rates in effect, based on resident/non-resident and undergraduate/graduate status of the student.

Graduation Fee
Contact Graduate Student Services for current fees.

Transcript Fees
Five official transcripts per week are free, however there is a $10.00 charge for priority (same day) service. Transcripts are available upon receiving a written, hand-signed request from the student. Transcripts of students with financial obligations to the university are not released until the obligation is paid.

Diploma Replacement Charge
- $25.00 - Master’s and Specialist’s degrees
- $35.00 - Doctoral degrees and Graduate Certificates

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.

All Other Overdue Books:
- $5.00 charge for each overdue item. Replacement cost of the purchase price of the item or $60.00 if the purchase price is not available plus $15.00 processing fee for lost items. Library fines may be paid on your CMU student account.

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. The cost of the room and unlimited meal plan for the academic year 2015-2016 range from $8,780 to $10,096.

University Apartments. Various contracts are available depending on the individual unit and number of bedrooms. The approximate monthly rate for students in 2015-2016 range from $494 to $685.

Housing Application and Penalty Fees
- Meal Plan Changes (Assessed to cover costs): $15.00
- Housing Contract Breakage: Contract breakage fees for cancellation of Housing Agreement will be assessed according to the Housing 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 Campus ID 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://centrallink.cmich.edu/services/student_services/central_card/Pages/default.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. Charges may be placed on the student’s CMU account and will be included on the next monthly billing statement. 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 202, 989-774-3059.

Vehicle Registration Fee
- Commuter: 175.00 / year
- Resident: 150.00 / year

Vehicle Registration Refund
- Students not returning for the Spring Semester will be entitled to a fifty percent motor vehicle registration refund. Applications must be made prior to the end of the first week of classes of the second semester. Students withdrawing within two weeks of the first day of classes are entitled to a full refund of the motor vehicle registration fee for that semester. Applications for refunds should be made to the University Police and accompanied by identifiable portions of the parking decals.

Bicycle Registration
Bicycles must be registered permanently at the University Police Department. There is no charge for this service. (Fees subject to change. See https://centrallink.cmich.edu/services/emergency/cmu-police/bike_reg/Pages/default.aspx)
Resident Status Policy

I. Introduction.
Central Michigan University has a commitment to the resident taxpayers of the State of Michigan to provide educational opportunity at lower tuition rates than those charged to non-residents. Therefore, there are two general tuition rates, one for Michigan residents and a higher one for non-residents. For the purposes of determining resident status by 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. This policy is designed to explain how a student may demonstrate the required intent and establishment of a domicile in Michigan. An individual whose activities and circumstances, as documented to the University, demonstrate that he or she has established a domicile in Michigan and intends to be domiciled in Michigan will be eligible for classification as a resident. An individual whose presence in the state 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 in Michigan. 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 that a Michigan domicile has been established. Furthermore, the University 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 Michigan 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 state as one of the criteria for determining eligibility for resident status, as described in I.C., below, and,
      b. demonstrates by clear and convincing evidence that the student has established Michigan as his or her domicile and intends to make Michigan 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 Michigan 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 Michigan as their domicile is presumed to be a non-resident student.

C. Physical Presence in Michigan:
   1. Generally, an individual must document one year of continual physical presence in the state 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, it is presumed that this student has not established domicile in the State of Michigan. However, if substantial information exists (see below for other factors) which clearly demonstrates the establishment of a Michigan domicile, the individual may be immediately eligible for resident status prior to the passage of one year.

D. Circumstances and Activities Which Lend Support to Claim of Michigan Resident Status:
The following circumstances and activities, though not conclusive or exhaustive, may lend support to a claim that a student has established Michigan as the student’s domicile and intends to make Michigan the student’s permanent domicile.
   1. A person appointed to a regular full-time position at the University (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 Michigan resident for tuition purposes.
   2. A non-resident transferred to Michigan for full-time employment purposes and that individual’s spouse or children may be classified as a Michigan resident for tuition purposes.
   3. Any individual using educational assistance under either Chapter 30 (Montgomery GI Bill® – Active Duty Program), 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 State of Michigan while attending Central Michigan University (regardless of his/her formal state 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).
   4. A student who is married to a person who is classified as a Michigan resident will be classified as a Michigan resident for tuition purposes.
   5. A student who has a parent or grandparent who graduated from CMU will be classified as a Michigan resident for tuition purposes.
   6. Additional Circumstances and Activities:
      a. Continuous presence in Michigan during periods when not enrolled as a student.
      b. Reliance upon only Michigan sources for financial support.
      c. Domicile in Michigan of family, guardian, or other relatives or persons legally responsible for the student.
      d. Former domicile in the State of Michigan and maintenance of significant connections therein while absent.
      e. Ownership of a home in Michigan if purchased without support from non-Michigan sources.
      f. Admission to and full-time practice of a licensed profession in Michigan.
      g. Long-term military commitments in Michigan.
      h. Permanent full-time employment in Michigan, provided that the applicant’s employment is the primary purpose for the applicant’s presence in Michigan.
      i. Spouse’s full-time, permanent employment in the state, provided that the spouse’s employment is the primary purpose for the student’s presence in Michigan.

(continued)
In classifying an individual as a resident the University will consider other circumstances and activities which indicate an intent by the individual to make Michigan the individual's domicile or which indicate that the individual has made Michigan his or her domicile.

E. Circumstances and Activities which Generally Lend No Support to a Claim of Michigan Resident Status:
The following circumstances and activities are temporary and indeterminate and, in and of themselves, do not demonstrate a permanent domicile in Michigan:
1. Voting or registration for voting in Michigan.
2. Possession of a Michigan driver's license.
3. Employment that is temporary or short-term.
4. Employment in a position normally held by a student.
5. Ownership of a Michigan home if purchased with support from non-Michigan sources.
6. The lease of living quarters.
7. Payment of Michigan 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 Michigan.
10. Presence in Michigan while in attendance at CMU or another institution of higher education.

F. Non-Citizens Lawfully Admitted to the United States:
(Lawful admission status is determined by the Director of the Office of International Affairs, or designee.)
1. A non-citizen of the United States (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 Michigan resident for tuition purposes, if such person has an appropriate, current visa, and meets the requirements for Michigan resident status specified in this policy.
2. A non-citizen transferred to Michigan for employment purposes (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 classified as a Michigan resident for tuition purposes, if such person has an appropriate, current visa, and meets the requirements for Michigan 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 same-sex partner as defined by CMU Human Resources, Faculty Personnel Services, or other authorized office, and dependent children) may be classified as a Michigan resident for tuition purposes, as long as such person meets the requirements for Michigan 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 Michigan 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 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 before the seventh day after the first day of classes during 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 disagrees with that decision, the individual may file an appeal following the procedures set forth in IV, below.

B. Graduate Students at Time of Admission:
1. The Director of Graduate Student Services, or designee, shall determine the initial resident status of new graduate students prior to the first registration.
2. If an individual disagrees with the decision of Graduate Student Services, that individual must file a properly completed Application for Resident Status with the Registrar's Office. The Application for Resident Status must be received before the seventh day after the first day of classes during 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 disagrees with that decision, the individual may file an appeal following the procedures set forth in IV, below.

C. All Students Requesting a Change in Resident Status:
The procedure for determining whether a nonresident student has acquired Michigan resident 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 before the seventh day after the first day of classes during the semester or term in which the student is seeking the resident status. 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 Director of Undergraduate Admissions, the Registrar, the Executive Director of International Affairs, the Associate Vice President for Student Affairs, and the Director of Graduation Student Services, 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 conclusive.
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 Michigan and has, in fact, established domicile in Michigan.

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, there are no further appeals for the semester or term covered by the Application for Resident Status.

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 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 for at least two months during each of three of the preceding five years. Verification of employment as migrant workers should be secured at least two months during each of three of the preceding five years.

Residency Status for Migrants

Migrant status is one factor considered when determining if a student is domiciled in Michigan 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 for at least two months during each of 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.

For the purposes of determining if a student is domiciled in Michigan 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 for at least two months during each of 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. Michigan residence is claimed by means of self-certification by the student, giving names of employer, date of employment, and location.

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 is 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 specifying 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 his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures 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 interests and/or needs to review an educational record in order to fulfill his or her 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 address
   b. state of residence
   c. age, and 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 honors and awards received, including selection to the Semester Honors or President’s list, honorary organization, or the GPA range for the selection.

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. 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 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
Financial Debt and Involuntary Withdrawal

Any amount owed to the university should be paid when due. A late charge of $30.00 per month will be assessed to past due accounts if the balance is $60.00 or larger. The maximum late charges assessed to an account is $180.00 or up to one half of the balance remaining outstanding, whichever is less. 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 official 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 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.

Refunds are issued either by direct deposit to a personal U.S. bank account of the student’s choice or to a CMU Money Card distributed by Money Network. Students must make a selection for their preferred method on CentralLink under Finances, Refund Payment Option.

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 received by students awarded financial assistance through the Central Michigan University 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.

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 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 completely withdraws from the university.

<table>
<thead>
<tr>
<th>Percentage of Tuition and Fee Refund for Fall/Spring</th>
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<tbody>
<tr>
<td><strong>Length of Session</strong></td>
</tr>
<tr>
<td>16 Weeks</td>
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<tr>
<td>10 Weeks</td>
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<tr>
<td>8 Weeks</td>
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<tr>
<td>5 Weeks</td>
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Global Campus Refunds

Drop or Withdraw from a CMU Global Campus 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 Global Campus Classes:
- 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 Centrallink, the student must immediately notify their program administrator 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 Global Campus Bulletin (https://bulletins.cmich.edu/default.aspx). For a Course Drops/Withdrawals Chart, see http://global.cmich.edu/courses/withdraw.aspx.

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 of 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 may 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):

- 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.

- All Cancellation Requests must be in writing.

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.
 Scholarships and Financial Aid

**Note:** While the information regarding financial aid is current at the time of this Bulletin's publication, financial aid requirements and opportunities change frequently. For current information, contact the office indicated for each of the programs listed below.

Central Michigan University, in conjunction with the federal and state governments and private and civic organizations, offers a variety of fellowships, assistantships, grants, loans, and employment opportunities to assist graduate students in financing their education.

**Financial Aid for Students in the College of Medicine**
Information on Financial Aid for students in the College of Medicine is available on the College of Medicine website [https://www.cmich.edu/colleges/cmed/students/Pages/Financial Aid.aspx](https://www.cmich.edu/colleges/cmed/students/Pages/Financial Aid.aspx). Contact the CMU College of Medicine Office of Student Financial Aid at 989-774-1495; CMED 1401B.

**Financial Aid Categories**

Financial aid for graduate students falls under two general categories: need based and non-need based. Each kind of aid has certain advantages and limitations, and each is subject to varying standards of eligibility, application procedures, and regulations. Work study employment is the only need-based financial aid program for graduate students. Non-need based financial aid includes graduate fellowships and scholarships, graduate assistantships, internships, non-work study campus employment, and loans.

**Financial Aid Information**

Students interested in any type of financial aid offered at CMU should contact the appropriate office for current information. Questions about graduate fellowships and scholarships should be directed to the Office of Research and Graduate Studies. Questions concerning graduate assistantships should be directed to the academic department offering the assistantship. Questions regarding financial aid applications, loans, and university student employment should be directed to the CMU Office of Scholarships and Financial Aid, Student Service Court; Mount Pleasant, MI 48859. Telephone 989-774-3674, FAX: 989-774-3634, e-mail: CMUOSFA@CMICH.EDU.

**Financial Aid Application**

To apply for federal and state financial assistance programs at Central Michigan University, students must complete the Free Application for Federal Student Aid (FAFSA). The application is available online at [www.fafsa.gov](http://www.fafsa.gov).

CMU financial aid awards are made for a maximum of one academic year. Re-application must be made each year.

**Verification**

Under the Federal Audit Quality Assurance program, CMU evaluates the accuracy of information submitted by financial aid applicants. The OSFA is required to collect documents to verify information on the FAFSA. These documents include, but are not limited to, federal tax returns and 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 agency for their further disposition.

**Out-of-State Tuition Awards**

CMU offers two out-of-state tuition award programs. The Graduate Out-of-State Tuition Merit Award program grants resident tuition to out-of-state students who: 1) achieve a 560 GRE Verbal score and a 660 GRE quantitative score or a 600 GMAT score or a 55 MAT score; and 2) have a cumulative undergraduate grade point average of at least 3.0 on a 4.0 scale; and 3) have an internet-based TOEFL score of at least 100 if not from a TOEFL-exempt country.

The Neighboring Regions Tuition Award program grants resident tuition to students from Indiana, Ohio, Illinois, and Wisconsin who have at least a 3.3 overall undergraduate grade point average and to students from Ontario, Canada, who have at least a 3.0 overall undergraduate grade point average.

Both awards are valid for the entire duration of the recipient’s graduate program provided he or she maintains good academic status. Students must be admitted to a CMU graduate degree program in order to qualify for either award.
Fellowships and Scholarships

A variety of fellowships and scholarships are awarded to CMU graduate students. These forms of financial aid are particularly valuable to students, because there are generally no concurrent service obligations associated with these awards. Because new fellowship and scholarship opportunities may become available, graduate students are advised to check with their department office and with the Office of Research and Graduate Studies.

Graduate Studies Fellowships

The processes for awarding of Fellowships was being reviewed at time of publication of this Bulletin. Please see grad.cmich.edu for more information as it becomes available.

Doctoral Research Fellowships

Note: Graduate students may be awarded a graduate assistantship OR a fellowship (CMU or otherwise). Graduate students may not receive both during the same academic year.

Doctoral Research Fellowships are awarded on a competitive basis to students enrolled full-time in a doctoral program. Doctoral Research Fellowships are awarded for one year and include a stipend, a 24-credit hour tuition scholarship and special library privileges. This fellowship will not pay for undergraduate coursework. All Doctoral Research fellows are classified as Michigan residents for tuition purposes only. This classification remains in effect for the duration of their doctoral program. Each Doctoral Research Fellowship recipient is expected to act as a research fellow under the tutelage of a designated CMU faculty member.

Eligibility. Recipients must register for and complete at least nine graduate credit hours with a cumulative GPA of 3.0 or better for each of the semesters of the fellowship.

Application Procedures and Deadlines. Fellowships are available in the following departments: Mathematics, Psychology, and History. Contact each department for their current application procedures and deadlines. Applications are available online on each departments website.

King/Chávez/Parks (KCP) Future Faculty Program

Note: This program may, or may not, continue to be funded by the State of Michigan. Contact Institutional Diversity for information. Graduate students may be awarded a graduate assistantship OR a KCP fellowship. Graduate students may not receive both during the same academic year.

The purpose of the King/Chávez/Parks Future Faculty Fellowship Program is to increase the pool of traditionally underrepresented candidates pursuing faculty teaching careers in postsecondary education. Preference may not be given to applicants on the basis of race, color, ethnicity, gender, or national origin. We encourage applications from minorities, women, people with disabilities, and individuals from cultural, linguistic, geographic, and socio-economic backgrounds who would otherwise not adequately be represented in the graduate student and faculty populations.

KCP awards have a maximum value of up to $20,000 for master’s students and $35,000 for doctoral students. Future Faculty Fellowship graduates are obligated, by signed agreement, to remain in post-secondary faculty teaching or administration in a public or private, 2- or 4-year, in-state or out-of-state postsecondary institution for a minimum of three (3) years equivalent full-time. Fellows who do not fulfill the teaching and/or other obligations of their fellowship agreement may be placed in Default, which results in their fellowship converting to a loan (referred to as a KCP Loan) that the Fellow repays to the State of Michigan.

Eligibility. To be eligible for a KCP Future Faculty Fellowship, the student must meet all entrance requirements for Graduate Studies and be accepted into a program of study that facilitates a teaching career in postsecondary education by the application deadline. The student must be a U.S. citizen and a resident of Michigan (as defined by CMU). Applicants must not currently be receiving a KCP Initiative Fellowship Award at another institution, and they may not have previously received another KCP Fellowship Award for the same degree level (master’s or doctorate). Applicants may not be currently in default on any guaranteed student loan and/or a KCP loan. Additionally, students must intend to teach at a postsecondary institution after graduation.

Students who accept a KCP fellowship must fulfill certain conditions or the award becomes a loan repayable to the State of Michigan. Recipients are required to: (1) maintain good academic standing (3.0 or higher); (2) earn the master’s degree within 4 years; (3) within one year after attaining a master’s degree, either enroll in a doctoral program or teach at a two or four year postsecondary institution for three years; (4) within one year after attaining the doctoral degree, teach in a postsecondary institution for at least three years.

Application Procedure. Applicants must submit the following: (1) a completed KCP application; (2) transcripts for all undergraduate and graduate coursework; (3) three letters of recommendation from academic and professional people, at least two of which must be from faculty within the applicant’s proposed field of study; (4) a professional statement describing current educational status, goals for graduate study, and how you would fulfill the goals of the FFF program; and (5) a current resume or curriculum vitae.

Application Deadline. Applications and all supporting materials must be submitted by March 30. Application materials are available on the www.cmich.edu website. Search on keyword KCP.

Awards and Scholarships

Contact the Office of Scholarships and Financial Aid for more information on the following awards and scholarships.

AAUW - M. Ruth Evans Award
Established in 1991 by Jackie M. Evans, members of the M. Ruth Evans family and members of the Mount 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.

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. This 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 and Public Administration 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.

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 that 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 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 Mount Pleasant community, for a junior, senior or graduate student majoring in health education and health science who has earned a 3.0 or higher GPA.

Richard & Colleen Burns Scholarship
Established in 1973 by Richard, 1969, and Colleen Burns, to honor Julia Egan Burns, 1902. The recipient will be a graduate student pursuing a career as a physician assistant and enrolled in The Herbert H. and Grace A. Dow College of Health Profession's Physician Assistant Program with a minimum GPA of 3.0. In the event there are no applicants within the PA program, it could be received by an undergraduate with intentions of entering the PA program. Preference will be given to a student with the greatest financial need from one of the following Mid-Michigan area schools: St. Johns, DeWitt, Westphalia, Fowler, Pewamo, Hubbardston, Carson City, Perry, and Ashley, Ovid-Elsie. The scholarship may be renewed for up to two years.

CDO-SLP Alumni Scholarship
Established in 1998 through alumni support, for a second-year graduate student in the Speech-Language Pathology Program in the Department of Communication Disorders.

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 scholarship 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.

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.

Paul David Cratin Physical Chemistry Graduate Student Endowed Award
Established in 2000 to honor Paul David Cratin, former professor. Proceeds from the endowment will be used to establish an award for a graduate student enrolled in the masters degree program in the area of physical chemistry.

Dow Corning MBA Endowed Scholarship
Established in 2006, the scholarship is in memory of Larry Reed, ’69. Income from the endowment will support a renewable scholarship for a graduate student enrolled in the College of Business Administration’s MBA program. The recipient will have regular admission status in the program and be performing at a high level in their academic coursework. Selection will be based upon GPA in the MBA program, performance in specific MBA courses, faculty recommendations, demonstrated leadership in MBA 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 eligible to intern as students with Dow Corning and willing to consider full time employment with Dow Corning upon graduation.

J. Dean and Betty L. Eckersley Audiology Scholarship
Established in 1996 as a renewable scholarship for a graduate status audiology student within the Department of Communication Disorders who earned a minimum GPA of 3.5 as 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 Department of Communication Disorders.

Richard D. Featheringham Endowed Scholarship
Established in 2005 by Dr. Richard ‘81, ‘84 and Audrey Featheringham. Income from the endowment will support a renewable scholarship for an undergraduate or graduate student with a major or minor in organ and a minimum GPA of 3.0. The student must audition with the School of Music.

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 semesters), and fulfill the in-kind service requirement upon return.

Wasaburo Fujimiyas Study Abroad Scholarship
Established in 2014 by Wasaburo Fujimiyas ’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.

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.

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 endowed scholarship will support a scholarship for students enrolled in the Political Science and Public Administration 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.

Ahmad Hakemi Scholarship Fund for Physician Assistant Students
Established in 2013 by Robert Wintermyer ’05 and friends, to honor Dr. Ahmad Hakemi, for his hard work and commitment to Physician Assistants at CMU and nationwide. Income from this endowment will support an award for a full-time student enrolled majoring in the Physician Assistant Program within The Herbert H. and Grace A. Dow College of Health Professions. Recipient will have a minimum GPA of 3.4 demonstrating financial need.
James E. Hornak Endowed Award
Established in 2009 by colleagues, former students, and family of Dr. James E. Hornak ’65, ’66, 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.

Robert and Marilouise Knott Special Education Award
Established in 2010 by the estate of Robert Knott ’41, ’57, to commemorate Robert and his sister, Marilouise. Income from the endowment will support a renewable award for a student enrolled in the Master of Arts (M.A.) in the Special Education graduate program within the College of Education and Human Services with a minimum of five credit hours and a 3.5 GPA.

Dr. Barbara Leiting-O’Connell Family Endowed Scholarship
Established in 2007 by Dr. John F. O’Connell ’83 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.

Robert E. McCabe Scholarship
Established in 1998 by Robert McCabe ’46 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.

Edward E. McKenna Academic Excellence Award
Established in 1998 in memory of this dedicated teacher, scholar, and unionist by the Department of Sociology, Anthropology, and Social Work. Endowment earning will provide cash awards for winning authors of an annual undergraduate and graduate paper competition

Bernard N. Meltzer Scholarship
Established by friends in honor of Bernard N. Meltzer, former faculty member and chairperson of the Department of Sociology, Anthropology, and Social Work, for a graduate student in sociology.

Albert Thomas and Brenda Jones Quick Department of History Graduate Study Abroad Scholarship
Established in 2013 by Albert T. Quick ’64 and Brenda Jones Quick for graduate students who wish to study abroad so that they may grow in the knowledge of history, cultures, values, political systems, religions, and peoples who live outside their communities and the United States. Income from the endowment will support a Department of History graduate student(s) who wishes to study abroad. The recipient will have a minimum cumulative GPA of 3.0 and have completed at least one semester of full-time graduate studies, have a desire to study abroad to enhance his/her research and to experience the culture in which he/she will live.

Anne Miller-Quimper Memorial Award
The Anne Miller-Quimper Memorial Award was established in 1991 though gifts from family and friends in memory of Anne Miller-Quimper (1940-1980). A graduate student in the School of Psychology program, Anne was killed by a car while she was jogging. Endowment earnings will provide annual stipends to graduate students in the School Psychology Program to support thesis or dissertation research.

Morris Family CMU Endowed Scholarship
Established in 2009 by Laurie and Michael J. Morris ’80, ’93. Income from the endowment will support a rotating award for a student enrolled in the College of Business Administration, College of Communication and Fine Arts and for students enrolled in a masters program with Global Campus. Main campus students must have successfully completed a minimum of 12 credit hours and maintain a 3.2 GPA. 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.

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.

Edward H. Potthoff, Jr. Scholarship
Established in 1983 by family and friends for a public administration graduate student demonstrating a career interest in local government.

Nicholas P. Redfield Scholarship
Established in 1998 by colleagues in memory of Dr. Redfield for a third-year Au.D. doctoral student who demonstrates a “client-centered” approach in clinical performance. Volunteer work and efforts to better the audiology program at CMU will also be considered in selecting a candidate for this award.

Margaret E. Sanford Marquardt Memorial Endowed Scholarship
Established in 2007 by Richard G. Marquardt ’59 in memory of Margaret E. Sanford Marquardt ’55, ’60. Income from the endowment will support a renewable scholarship in the Department of Communication 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.

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.

James and Catherine Steinmetz Graduate Scholarship
Established in 2011 by Dr. Joseph ’77, ’79 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 Humanities & Social and Behavioral Sciences.

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.

John E. Warriner Scholarships
John E. Warriner Scholarships are awarded on a competitive basis to outstanding juniors, seniors, and graduate students enrolled in a humanities or social science program within the College of Humanities and Social & Behavioral Sciences.

Eligibility. Graduate student applicants for the Warriner Scholarships must be accepted into a graduate program in one of the following departments: Economics, English Language and Literature, History, (continued)
Scholarships and Financial Aid

Political Science and Public Administration, Communication and Dramatic Arts, or Sociology, Anthropology and Social Work. They must have a GPA of at least 3.25 and demonstrate financial need.

**Application Procedure.** Applicants must submit the following: (1) a completed application form; (2) transcripts of all undergraduate and graduate study; (3) two letters of recommendation from faculty who have worked with the applicant; and (4) a letter describing the applicant's educational and professional goals and explaining how the scholarship would benefit the recipient. All applicants must have a FAFSA on file at CMU.

**Application Deadline.** Applications should be submitted by March 15. Scholarship recipients will be notified by May 1.

**Application Forms and Information.** For application materials and information, contact the College of Humanities and Social & Behavioral Sciences, CMU, 106 Anspach, Mount Pleasant, MI 48859; telephone 989-774-3341.

**Marrian Whitney Summer Graduate Scholarship**
Awarded to an outstanding graduate student who is completing a thesis in zoology. The award may be used to support the graduate student in the summer.

**Robert L. Wintermyer Endowed Scholarship Fund for Physician Assistant Students**
Established in 2011 by Robert Wintermyer '05, CMU faculty, to honor Physician Assistant students. Income from this endowment will support an award for a second year Physician Assistant student in The Herbert H. and Grace A. Dow College of Health Professions who has a minimum GPA of 3.4. Preference will be given to a student with financial need.

**Daniel E. & Mildred G. Wujek Scholarship**
This scholarship recognizes an outstanding second-year botany or aquatic biology graduate student who has been identified as worthy of distinction. The award may be used for tuition, books, and board at a biological station, and for research supplies and logistics.

This endowment was established by CMU alumni Daniel E. and Mildred G. Wujek. Daniel Wujek is a faculty member in the CMU Department of Biology.

**Small Grants and Awards**
The processes for awarding of grants and awards was being reviewed at time of publication of this Bulletin. Please see grad.cmich.edu for more information as it becomes available.

**Army ROTC Scholarships**
ROTC awards scholarships to students at CMU. The Army ROTC scholarship program for graduate students includes a financial benefit package for a period of two years. Scholarships are awarded on a competitive basis to prospective cadets, each of whom must be of good moral character, a U.S. citizen, medically qualified, not more than 31 years of age or less at graduation, and able to pass the Army Physical Fitness Test; have no civil convictions (other than minor traffic violations), a GPA of at least 2.5 (4.0 scale), scholar, athlete, and leader attributes, and a minimum of two years remaining in graduate school.

Each scholarship pays for tuition, laboratory fees, on campus educational fees, and $900 for the purchase of textbooks, class supplies, and equipment. Army ROTC Scholarship recipients receive a tax-free subsistence allowance of $350-400 per month for each school year that the scholarship is in effect. The Michigan National Guard, in partnership with ROTC, also offers a non-competitive financial assistance package which pays for tuition and up to $1,200 a month directly to the student.

Contact the Military Science Department at 989-774-3049 or 989-774-7440.

**Graduate Assistantships**

**Program Description**

**Note:** Graduate students may be awarded a graduate assistantship OR a fellowship (CMU or otherwise). Graduate students may not receive both during the same academic year.

Graduate assistantships are service-related appointments, requiring teaching, research, or administrative services or a combination of the three. The responsibilities may be quite variable. A full-time assistantship requires approximately 20 hours of work per week (including the summer); a half-time assistantship requires about 10 hours weekly. For summer assistantships, a full-time appointment requires approximately 320 hours of work throughout the summer; a half-time assistantship requires approximately 160 hours.

**Graduate Assistant Benefits**

Teaching and Administrative Assistants are members of a collective bargaining unit. More information is available at: https://www.cmich.edu/office_provost/academic_administration/FPS/Documents/GSU%20Agreement%202013-16%20Final%20Copy.pdf. Research assistants are not members of the union and information related to their appointments is also available online at https://www.cmich.edu/office_provost/academic_administration/FPS/Pages/default.aspx.

Graduate assistants are classified as Michigan residents for the purpose of determining tuition rates at CMU. This classification remains in effect for the duration of their stay at CMU if working on a doctoral program. For specialist's and master’s degrees, and graduate certificates, this classification as a Michigan resident is in effect only during the academic year of the award (including the subsequent summer). The tuition hour allotment may be spread across the academic year for courses on the student’s Authorization form beginning with the fall semester and continuing through the following summer sessions I and II. Graduate Assistantships pay for graduation tuition at the main campus tuition rate and will not pay for undergraduate coursework.

Graduate assistants are covered by travel accident insurance which provides $25,000 to a beneficiary in case of accidental death while traveling on university business.

Graduate assistants are given special library privileges, allowing them to check books out for a six month period.

**Eligibility**

To receive an assistantship, a student must be admitted to Graduate Studies under regular, conditional, or non-degree admission. Students who have concurrent or accelerated admission status may be appointed as graduate assistants only if they have special permission from the Dean of the Office of Research and Graduate Studies. Other hiring criteria are determined by the department or office responsible for the assistantship.

Graduate assistants must maintain a cumulative, graduate GPA of 3.0. The following credit hour loads are also required:

- Graduate Assistants fall or spring semesters: 6 credit hours
- Graduate Assistants summer semester: 3 credit hours
- Final semester of enrollment before degree completion: only the number of graduate credit hours needed to complete the degree requirements. This waiver is for only one semester. Requests for exemptions are evaluated on a case-by-case basis by the Dean of the Office of Research and Graduate Studies.

U.S. Department of Homeland Security regulations affect international students' eligibility for assistantships. The Office of Research and Graduate Studies will confirm whether an individual international student is eligible for an assistantship.
Application and Selection Procedures

Each department establishes its own application and selection procedures. Therefore, prospective graduate assistants must contact individual departments to apply. While it is always best to apply early, different departments have different application deadlines and due to extenuating circumstances, graduate assistants are sometimes selected a few days before classes start.

Responsibilities

The responsibilities of a graduate assistant are determined by the hiring department. The responsibilities must be commensurate with the time constraints of the assistantship appointment.

General Requirements for Loans and Work Study

Academic Eligibility

Graduate students must register for at least five credit hours per semester at CMU to be eligible for federal student aid programs. Credit hours are determined after the close of the Drop/Add period.

Policy and Award Revision

CMU reserves the right to revise a student's financial aid award if government regulations, university policy or sources of funding change prior to or during an academic year; if overpayment occurs; or if acceptance of the award is made after the acceptance date.

Debt and Default

Federal aid recipients may not owe a refund from any grant or loan or be in default on any federal loan to be eligible for assistance.

Financial Aid Assessment

The federal need 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 previous year earnings and untaxed income, and a percentage of personal savings and assets.

Satisfactory Academic Progress

Federal regulations require that Central Michigan University monitor the Satisfactory Academic Progress of all students. There are three distinct criteria which must be monitored and met to maintain eligibility for federal student aid, as well as most state and institutional student aid programs. This rule applies to all students applying for aid regardless if they have received financial aid in previous semesters. These financial aid requirements are separate from students’ academic requirements. Progress is measured at the end of each semester (including the summer semester) to determine a student’s financial aid eligibility for the following semester.

Students in graduate programs may not receive financial aid if they have attempted 150% or more of the number of credits required of their program.

All students (graduate and graduate-professional) must complete 67 percent of the courses they attempt each semester of enrollment. Attempted hours are based on the number of credits for which the student is registered at the conclusion of the Registrar’s posted “Deadline for Dropping a Class with a Full Cancellation of Tuition.”

In addition to these criteria, Graduate students must maintain a 3.00 cumulative grade point average.

Consequences of Unsatisfactory Progress

Students who reach their time limit without completing their degree will be denied further federal and most state and institutional financial aid as a student at that level. If you are attempting a master’s degree and reach the eligibility limit, you would be denied further aid until the master’s degree is conferred, at which time you would regain eligibility for a second master’s, doctoral, or professional degree.

Students who fail to complete 67 percent of their attempted courses in a semester will be warned. A failure to bring their completion rate to 67 percent in the next semester of enrollment will result in denial of federal and most state and institutional aid beginning with the next semester of enrollment. A student will remain on financial aid suspension until he/she completes 67% of attempted courses within a semester at CMU. Only CMU credit hours completed are counted as credits earned. Grades of I (Incomplete), W (withdrawal), X (audit), and Z (deferred) are not counted as earned credit. Students that are placed on financial aid denial due to deferred grades while continuing to work on a thesis or dissertation will need to have their advisor email the OSFA to confirm that satisfactory academic progress is being made. This communication be required prior to any additional aid being paid out for the student. For example, a student who attended CMU in the Fall semester at CMU and attempted 9 graduate credits, but withdraws from a 3 credit course will have completed 6 of 9 credits for a completion rate of 66%. This student will be warned for one semester and eligible for aid while on warning. A second semester of less than a 67% completion will result in the student being denied further aid until he or she completes 67% of attempted courses within one semester of enrollment at CMU.

Graduate students who fail to maintain a cumulative GPA of 3.00 or higher at the end of each semester will be warned. A failure to bring the cumulative GPA to a 3.00 or higher by the completion of the next semester will result in the student being denied further aid until he or she brings the cumulative GPA to the required 3.00 or higher.

Appeal Process

Students who have faced extraordinary circumstances may appeal the denial of financial aid. Documentation of your circumstances is required, and students are cautioned that appeals are not routinely approved. In most cases a decision will be made within 15 business days of receiving an appeal and the appropriate documentation. Students are notified of appeal decisions in writing or through their CMU email account.

Continuing at CMU after Aid is Denied

Students denied financial aid generally may continue attending Central Michigan University using private aid sources such as alternative student loans (https://www.cmich.edu/ess/OSFA/Pages/ALT-LOAN.aspx) or by funding their education themselves. Please note that on the alternative loan list, some loans listed are NOT available to students on Financial Aid Suspension.

Student Loans

Student loan requirements and regulations can be quite complex; all students are encouraged to work closely with the CMU Office of Scholarships and Financial Aid. The financial aid office has publications that provide detailed information on loan programs, and financial aid advisors are available to answer questions and offer information and advice concerning student loans. Financial aid advisors are available on a walk-in basis in the Student Service Court in the Bovee UC or by appointment in Warriner 202.

The total amount of all loans borrowed may not exceed the student’s estimated cost of attendance minus the financial aid awarded for the period of enrollment.

Scholarships and Financial Aid (continued)
William D. Ford Federal Direct Loan Program

Unsubsidized Student Loans

Unsubsidized loans are made to students by the federal government and applied directly to the student's account. The program is open to all students who have completed the FAFSA and have federal loan eligibility. The student is responsible for the interest that accrues while he/she is in school.

The aggregate maximum for undergraduate study is $31,000 for a dependent student and $57,500 for an independent student. Graduate students making satisfactory academic progress who carry at least five (5) graduate semester hours may borrow up to $20,500 in an unsubsidized Federal Direct Loan. The aggregate maximum for undergraduate and graduate study combined is $138,500. Application is usually made for one semester or an academic year (9 months), with summer school requiring a separate award.

The interest rate for a Graduate Federal Direct unsubsidized loan is fixed. Student borrowers are assessed an origination fee prior to loan disbursement.

Six months after ceasing to be at least a half-time student, the borrower must begin repayment. Several repayment options are available; contact your servicer. Payment of principal may be deferred under certain conditions. Students should refer to their promissory notes for details.

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 available online at www.studentloans.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. This online session will take about 30 minutes to complete through www.studentloans.gov.

Federal Graduate PLUS Loan

This program is for students in graduate level programs only. Students must file the FAFSA, be enrolled at least half-time, and receive all unsubsidized loan eligibility before a PLUS loan may be disbursed. This loan is a non-need loan for students with good credit histories. Applicants may borrow up to the cost of attendance minus other financial assistance. Students will receive an automatic deferment while enrolled at least half-time. Interest accrues while the student is enrolled in school and during grace periods. The interest rate is fixed. Students may complete a Graduate PLUS Loan Application available online at www.studentloans.gov.

Student Employment Opportunities

Internships and Co-op Opportunities

CMU encourages internship and co-op experiences for graduate students. By definition, an internship is a requirement of a student’s program of study, while a co-op experience enhances but is not required for the program. Both require that the student perform services related to the student’s area of study. The service is generally provided to an agency or business outside of CMU’s control, and pay levels generally reflect the graduate student’s advanced standing. For information on internship or co-op opportunities, students should contact their academic department.

CMU Student Employment Programs

During the academic year, there is no limit on the number of hours per week that a student may work (international students may work only 20 per week during the academic year). However, students are here primarily to complete their degree program and often work to help cover the associated expenses. The need for some students to be employed for a greater number of hours should not compromise their progress toward the fulfillment of their degree requirements. During periods of non-enrollment (summer, spring break, semester break), students may work up to forty hours a week.

Work Study. CMU participates in the Federal College Work Study (FWS) Program. This program requires that the student be enrolled in at least 5 credits in a graduate program of study.

Eligibility is based on financial need. Therefore, to qualify for work study, students must demonstrate financial need by completing the FAFSA form and if requested, by submitting verification materials (e.g., income tax returns) to the Office of Scholarships and Financial Aid. Contact the financial aid office for more specific information.

Eligibility for work study does not guarantee job placement. Pay rates are commensurate with job duties and skills. Any student participating in the FWS program is told the maximum amount he/she can earn during the academic year, from this program. After students have earned the amount for which they are eligible for a given year, they will be allowed to continue their job placement only if the hiring department has another source of funds for paying them. (See GSA below.)

General Student Assistance Employment Opportunities. General Student Assistance (GSA) provides an opportunity for campus offices to hire undergraduate and graduate students regardless of the students’ financial need. The demand for these positions exceeds the supply, so pay levels may not be attractive to graduate students.

There is no limit to the amount of GSA money a student can earn in a year. Graduate students should check with their own departments and with the Student Employment Office in the Bovee University Center regarding GSA opportunities.

Off-Campus Employment. Students are free to seek employment off campus with no interference from the university. (International students should contact the Office of International Affairs to determine eligibility for off-campus employment.) To assist students in finding jobs, CMU operates the Job Bank, located in the Student Employment Office in the Bovee University Center. Students who are not employed on campus through the work study program (FWS) and who are not graduate assistants may use the services of the Job Bank.

Contact Information

All students covered under any of the above programs must contact the CMU OFSA, 202 Warriner Hall, 989-774-3674 for additional information.

Veterans' Resource Center

The Veterans’ Resource Center (VRC) serves main campus and Global Campus students who are veterans, spouses, dependents or military students. VRC staff will help each student navigate through CMU, 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, 8:00 a.m.-5:00 p.m. or by appointment. The Veterans’ Resource Center is located in Warriner Hall 114 and may be reached at 989-774-7991.

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 517-241-7748, www.michigan.gov/mdcr/0,4613,7-138---240889--00.html. The student must be enrolled in a degree-granting program.
Academic Information

Note: It is the expectation of Graduate Studies that graduate students are responsible for being knowledgeable of and adhere to the policies, procedures, requirements, regulations, and deadlines printed in this Bulletin and their specific departments and programs.

Assignment to Advisor and Authorization of Degree Program

As a graduate student studying for a certificate, master’s, specialist’s, or doctoral degree, an advisor in your department will be assigned to you. Within the first semester of graduate study, an Authorization of Degree Program – Graduate or Doctoral form should be completed in consultation with your advisor and submitted to Graduate Student Services. If registering for course work prior to being assigned to an advisor, graduate students should contact the department chairperson or graduate coordinator to ensure that the coursework can be counted toward the graduate certificate or degree. Changes to an authorized program are made via the Course Substitution Form on the Office of Research and Graduate Studies website.

Residence Requirement

A graduate student should devote such time to graduate study and research in residence at CMU as may be appropriate to the program of study. Students are expected to take every opportunity to work in close association or collaboration with graduate faculty members, with other graduate students in the same program, and with distinguished visiting scholars. These opportunities exist at the university campus and in classes, seminars, internships, and research projects organized or placed elsewhere as part of the university’s continuing involvement in a broadly-based commitment to education.

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.

Distance Learning Courses

Courses in distance learning format (e.g. web-based courses and other non-face-to-face formats for delivering instruction) may be used to complete degree requirements unless otherwise specifically excluded. CMU courses and programs approved for distance learning delivery (as well as restrictions) are given in the descriptions of courses and degrees in this Bulletin.

Transcripts

Official transcripts may be requested via an online form (https://www.cmich.edu/ess/registrar/RegistrarRecords/RegistrarTranscriptInformation/Pages/Official_Transcript_Request_Form.aspx). Transcripts are free unless an expedited request is made. Transcripts of students with financial obligations to the university are not released until the obligation is paid in full.

General Regulations

Matters upon which there has been no direct legislation for graduate students will be governed by the general university regulations.

Degree Candidacy

Admission to Candidacy

Specialist’s Degree. Admission to graduate study does not imply Admission to Candidacy for any Specialist’s degree. Admission to Candidacy is granted only after the applicant has:

1. Fulfilled all the prerequisites for admission to the degree program;
2. Fulfilled all special requirements, such as admissions tests, letters of recommendation, and qualifying examinations specified by the department which has jurisdiction over the curriculum;
3. Submitted an Authorization of Degree Program - Specialist form approved and signed by the advisor;
4. Completed at least ten hours of graded course work on the chosen program at CMU with a cumulative grade point average of 3.0 or higher in all of this work;
5. Filed an Admission to Candidacy - Specialist Degree form approved by the advisor and the department chair and submitted to Graduate Student Services.

Ph.D. or Ed.D. Degree. (Other doctoral programs may require candidacy.) Admission to graduate study does not imply Admission to Candidacy for a Ph.D. or Ed.D. degree. Admission to Candidacy is granted only after the applicant has:

1. Fulfilled all the prerequisites for admission to the degree program;
2. Fulfilled all special requirements, such as admissions tests, letters of recommendation, and additional student background information specified by the department;
3. Submitted an Authorization of Degree Program - Doctoral form approved and signed by the advisor;
4. Completed most of the prescribed coursework for the degree with a cumulative grade point average of 3.0 or higher, satisfied any research or professional tool requirements established by the department, and passed a comprehensive examination conducted and evaluated by the student’s examination committee;
5. Filed an Admission to Candidacy - Doctoral Degree form approved by the advisor and the department chair, and submitted to Graduate Student Services.
**Degree Requirements**

Students may elect to graduate under the curricular requirements and regulations in any Graduate Bulletin in effect between the date of the original admission on a graduate degree or certificate program and the date that degree or certificate was received with such modifications and substitutions as may be necessitated by changes and developments in the university's programs.

**Graduate Certificate**

You are eligible to receive a graduate certificate after you have:

1. Received Regular Admission to the graduate program and filed an Authorization of Degree Program - Graduate form approved and signed by an advisor;
2. Completed 15 to 18 hours of graduate coursework approved by the advisor. A maximum of six (6) semester hours from a previous or concurrent graduate degree or certificate may be transferred toward a graduate certificate. Military coursework with a grade of outstanding or excellent is transferable. If a student has not had adequate preparatory coursework for the curriculum chosen and has to take additional coursework to make up any deficiencies, these courses are not included in the fifteen to eighteen hour graduate course work requirement. These courses will, however, be stated on the Authorization of Degree Program - Graduate form. Any course in which the student earns a grade below C is not acceptable in fulfillment of a graduate certificate requirement.
3. Fulfilled all of the requirements of the curriculum on which the student is enrolled and all other university regulations pertaining to the program;
4. Obtained a cumulative grade point average of 3.0 (B) or higher in graded course work at CMU and a cumulative grade point average of 3.0 (B) in all coursework on the student's authorized graduate certificate program;
5. Completed all requirements for the graduate certificate within seven years after matriculation in the program. Courses completed more than seven years prior to graduation cannot be used to meet graduation requirements without an extension of the time request. Please note that extension of time requests are serious and approval by the advisor and department does not guarantee approval by Graduate Studies. Extensions of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically "life" events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. Extension requests are limited to a one time request of twelve to eighteen months and for up to 9 graduate credit hours. See Extension of Time section for further information.
6. Made application for the graduate certificate by the date specified in the section titled "Deadlines" on the inside front cover of this Bulletin, filed a Graduation Application in Graduate Student Services, and paid the required graduation fee. (See Graduation Procedures.)

*NOTE: Graduate Certificates as described in this section are not related to earning a teaching certificate. See page 212 of this Bulletin for Teacher Certification information (See Graduate Procedures).*

**Master's Degree**

You are eligible to receive a master's degree after you have:

1. Received Regular Admission to the degree program and filed an Authorization of Degree Program - Graduate form approved and signed by the advisor;
2. Completed a minimum of thirty hours of graduate work approved by the advisor. Courses in which you earn a grade below C are not acceptable in fulfillment of this degree requirement. If you have not had adequate preparatory coursework for the curriculum chosen, you must take additional coursework to make up the deficiencies either in the field of specialization, in cognate areas, or both, as determined by your advisor. If you must earn more than thirty hours to receive the degree, the additional hours and their nature will be stated in the Authorization of Degree Program - Graduate form;
3. Fulfilled all of the requirements of the curriculum on which you are enrolled and all other university regulations pertaining to the program;
4. Obtained a cumulative grade point average of 3.0 (B) or higher in graded course work at CMU and a cumulative grade point average of 3.0 (B) in all coursework on the student's authorized degree program;
5. Earned at least fifteen of the hours presented for the degree in courses at or above the 600 level;
6. Fulfilled all other university regulations pertaining to your program;
7. Submitted evidence of scholarship and/or creative or artistic ability beyond the completion of coursework. Two plans, differing to some extent in the various departments, are in general use. Subject to the approval of the major advisor, students may choose either plan.
   - **Plan A** consists of coursework, a thesis (6-9 credits), and an oral defense of the thesis.
   - **Plan B** consists of primarily coursework, requires no thesis, but must include additional significant evidence of scholarship, such as research, independent studies, internships, or practica and/or creative or artistic ability which the department of the field of specialization may wish to prescribe.
   A comprehensive examination over the field of specialization may be required under either Plan A or Plan B. It is the responsibility of the student to complete the Authorization form, obtain the appropriate signatures, and submit the form to the Office of Research and Graduate Studies outlining which plan the student will be completing.
8. Made application for the degree and diploma by the date specified in the section titled Deadlines on the inside front cover of this Bulletin;
9. Completed all requirements for the graduate degree within seven years after matriculation in the program. Courses completed more than seven years prior to graduation cannot be used to meet graduation requirements without an extension of the time request. Please note that extension of time requests are serious and approval by the advisor and department does not guarantee approval by Graduate Studies. Extensions of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically "life" events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. Extension requests are limited to a one time request of twelve to eighteen months and for up to 9 graduate credit hours. See Extension of Time section for further information.
10. Filed a Graduation Application in Graduate Student Services and paid the required graduation fee. (See Graduation Procedures.)
Specialist's Degree

You are eligible to receive the Specialist's in Psychological Services degree or Specialist's in Education degree after you have:

1. Received the master's degree, if this is a prerequisite on your curriculum;
2. Been admitted to candidacy for the appropriate specialist's degree;
3. Completed a minimum of sixty semester hours (thirty hours beyond the master's degree if the master's is required or was earned elsewhere) of graduate work approved by your advisor. Courses in which you earn a grade below C are not acceptable in fulfillment of this degree requirement;
4. Completed the requirements for the curriculum program in which you are enrolled and all other university regulations pertaining to your program;
5. Obtained a cumulative graduate grade point average of 3.0 (B) or higher in graded graduate coursework at CMU and a cumulative graduate grade point average of 3.0 (B) in all coursework on the student's authorized degree program;
6. Completed a thesis or field study as part of your master's or your specialist's degree.
7. Earned at least twenty of the last thirty hours of coursework at or above the 600 level;
8. Applied for the degree and diploma by the date specified in the Deadline section on the inside front cover of this Bulletin;
9. Completed all requirements for the specialist degree within seven years after matriculation in the program. Courses completed more than seven years prior to graduation cannot be used to meet graduation requirements without an extension of the time request. Please note that extension of time requests are serious and approval by the advisor and department does not guarantee approval by Graduate Studies. Extensions of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically "life" events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. Extension requests are limited to a one time request of twelve to eighteen months and for up to 9 graduate credit hours. See Extension of Time section for further information.
10. Filed a Graduation Application in Graduate Student Services and paid the required graduation fee. (See Graduation Procedures.)

Doctoral Degree

You are eligible to receive a doctoral degree as approved and implemented by the university after having:

1. Received a master’s or specialist’s degree, if this is a prerequisite on the curriculum;
2. Acquired the research skills of the discipline as required by the department;
3. Passed a comprehensive examination or comprehensive clinical assessment evaluated by more than one member of the graduate faculty;
4. Been admitted to candidacy for the doctoral degree (if a Ph.D., Ed.D., or DHA degree program);
5. Completed the minimum of 60 graduate credit hours beyond the bachelor’s degree with a cumulative graduate GPA of 3.0 (B) or better and a graduate GPA of 3.0 (B) or better in all coursework on the student's authorized degree program. The required number of graduate credit hours varies by graduate program. Students should check with their department to ensure they are completing the required number of graduate credit hours beyond the bachelor's degree.
6. Maintained at least a cumulative grade point average of 3.0. Courses in which the student earns or has earned a grade below a C do not count toward meeting any degree requirements. A student with three or more grades of C+, C, or C- may not be awarded a doctoral degree. Coursework that is not part of the student's doctoral program of study is excluded from this policy. Particular programs may have more stringent grade requirements.
7. Fulfilled all the requirements on the authorized doctoral program as developed by the student and the student's advisor or advising committee. The advisor or advising committee will supervise the program until the degree is completed or until it has been determined that the student should discontinue doctoral study;
8. Earned at least fifteen hours in courses at the 700 level or above (excluding dissertation, doctoral project and internship credits) and fifty of the total hours at the 600 level or above;
9. Prepared a doctoral dissertation, or in the case of some applied programs, a doctoral project. A doctoral project must be conducted under an advisor who meets the requirements for regular graduate faculty status as defined by the Academic Senate's Graduate Education Policy. All other policies and procedures for the doctoral project are to be determined by the academic program and will be presented in the section of the bulletin pertaining to the academic program. For the dissertation, you may receive a minimum of twelve hours of credit and a maximum of thirty-six hours of credit as specified on the authorized doctoral program under the guidelines of the specific department. The research for the dissertation will be conducted under the guidance of a dissertation supervisor and must be approved by a doctoral committee consisting of at least three graduate faculty members.
10. Completed the requirements for the doctoral degree within eight years prior to the award of the doctoral degree with prior relevant graduate degree and ten years if the student began doctoral study without prior relevant graduate degree. Courses completed outside these time frames cannot be used to meet graduation requirements without an extension of the time request. Please note that extension of time requests are serious and approval by the advisor and department does not guarantee approval by Graduate Studies. Extensions of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically "life" events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. Extension requests are limited to a one time request of twelve to eighteen months and for up to 9 graduate credit hours. See Extension of Time section for further information.
11. Filed a Graduation Application in Graduate Student Services and paid the required graduation fee. (See Graduation Procedures.)

NOTE: Particular doctoral programs may have more specific or more stringent program requirements.
The satisfactory completion of a thesis is a requirement on some master's degree programs and optional on others. The satisfactory completion of a thesis at CMU is a requirement for some specialist's degrees, and satisfactory completion of a doctoral project or dissertation is a requirement for some doctoral degrees. Satisfactory completion is determined by the student's committee, department, college, and Graduate Studies.

Students should be aware that the university has specific policies that govern research involving human or animal subjects and recombinant DNA. Information on experimentation may be obtained from the department chairperson, committee chairperson, or the Office of Research and Graduate Studies.

For stylistic guidelines, students are expected to follow the most recent Office of Research and Graduate Studies' requirements, which are explained in the Guidelines for the Preparation of Theses, Doctoral Projects, Dissertations, and Journal Articles. These guidelines are available online at wwww.grad.cmich.edu.

Theses/doctoral projects/dissertations/journal articles are evaluated by a committee. Students should consult their advisor in selecting a committee chairperson and at least two committee members. The advisor may or may not be the committee chairperson, depending upon the student's academic emphasis. One member of the committee may be from a discipline other than that of the student's area of concentration. All members of the committee must have graduate faculty status. Students can check their committee members' status by contacting Graduate Studies.

For theses/doctoral projects/dissertations/journal articles completed through Central Michigan University's Global Campus, one of the three committee members must be a CMU main campus regular faculty member or a regular faculty member from a collaborating university (such as in a joint program), or if all committee members are from Global Campus, the committee chair must meet the requirements for regular graduate faculty status as defined by the Academic Senate's Graduate Education Policy and be approved as committee chair by the department.

The chairperson of the thesis/doctoral project/dissertation/journal article committee will have active direction of the work, but may wish to consult with other members of the committee about matters pertinent to its development. The committee as a whole, however, will determine the quality of the work.

After a committee has been selected and a topic chosen, a Prospectus - Theses, Doctoral Projects, Dissertations, and Journal Articles form must be completed by the student and approved at the department level as well as by the Vice President/Dean of the Office of Research and Graduate Studies as well as the committee verified by Graduate Studies. A student may not enroll for more than three credits of the thesis or dissertation and projects must not be undertaken until this has taken place. Projects undertaken prior to the Vice President/Dean of the Office of Research and Graduate Studies approving the Prospectus may be denied, the project deemed invalid, and the student will have to begin the thesis/doctoral project/dissertation process anew. The department may require a more detailed prospectus.

Each student who writes a thesis/doctoral project/dissertation/journal article must enroll for such credit. Letter grades are not used in the evaluation of the thesis/doctoral project/dissertation/journal article; therefore, the student's grade point average is not affected by credit earned for these. In all departments the thesis/doctoral project/dissertation /journal article is designated as credit (CR) if acceptable and no credit (NC) if not acceptable. Students will receive 6-9 semester hours of credit for an acceptable thesis/journal article. For a doctoral project/dissertation/journal article, a minimum of twelve and a maximum of thirty-six semester credit hours may be earned depending on the guidelines for the specific department.

The final draft of the defended, committee-approved thesis/doctoral project/dissertation/journal article must be submitted to Graduate Studies for approval according to the deadlines set forth by Graduate Studies. Typically these dates can be found on the inside cover of the Graduate Bulletin and within the Guidelines for the Preparation of Theses, Doctoral Projects, Dissertations, and Journal Articles. Failure to meet this deadline or any departmentally stipulated deadline may result in the student's graduation being delayed until the following semester. Students and Committee Chairs should consult the Guidelines for the Preparation of Theses, Doctoral Projects, Dissertations, and Journal Articles for the current process and University expectations.

Field Study

A field study requires the student to conduct a major project approved and directed by an advisor who meets the requirements for regular graduate faculty status as defined by the Academic Senate's Graduate Education Policy. Upon completion of the field study, the student must pass a publicly announced oral defense of the project.

Graduation Procedures

At least eight weeks prior to the end of the semester in which a student intends to graduate, he/she must submit a completed Graduation Application form along with the required fee to Graduate Student Services. Application deadline dates are published on the front inside cover of this Bulletin. Graduation applications are available on the Office of Research and Graduate Studies website.

Application for Graduation. In order to graduate, the student must submit a Graduation Application form. The form must be submitted to Graduate Student Services no later than the deadline specified on the inside front cover of this Bulletin. At the time of filing the graduation application, it is the responsibility of the student to determine whether his/her advisor will be available to approve the thesis or to sign any other papers necessary for graduation. In the event the student's advisor will not be available on campus at such a time, the student assumes responsibility for making suitable arrangements for the approval of the thesis, field study, dissertation, or other papers with the advisor prior to the advisor's departure.

Graduation Audit. After a student submits a Graduation Application form, the student's record is audited by Graduate Student Services to verify completion of program requirements. After the audit is complete, the student and advisor will each be mailed an audit form indicating either that all requirements are satisfied or that the student has requirements left to complete. If there are requirements left to complete, the audit form will indicate what requirements the student must complete in order to graduate. Students who fail to complete requirements by the deadline will receive a Failure to Complete Requirements for Graduation form, indicating that they will not graduate at the upcoming graduation and advising them to apply for the next graduation period. Students must reapply to graduate in a subsequent semester; the fee for each subsequent graduate application is $25.00.

To encourage students to monitor their own progress toward graduation, a Self Audit form is available on the Graduate Studies website. Although it is not mandatory, students are urged to complete the Self Audit before submitting a Graduation Application.

Diplomas. Diplomas are mailed to students about six weeks after commencement. If a student needs evidence of degree completion in less than six weeks, written verification is available through Graduate Student Services.
Post-Baccalaureate Teacher Certification

See Appendix I, Standards Leading to Teacher Certification, for information on Post-Baccalaureate Teacher Certification.

Academic Regulations

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.

<table>
<thead>
<tr>
<th>Letter</th>
<th>Points per Semester Hour</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>Superior</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td>Very Good</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td>Good</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
<td>Acceptable</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td>Acceptable</td>
</tr>
<tr>
<td>E</td>
<td>0.0</td>
<td>Failing</td>
</tr>
</tbody>
</table>

CR Credit
NC No Credit
I Incomplete
N No Grade Submitted
W Withdrawn
X Audit
Z Deferred Grade

1 Does not count toward graduate degree; does count in grade point average.
2 Counts for graduation, but not in grade point average.

There is no passing grade lower than a C in the graduate marking system.

Undergraduate courses are not calculated in the hours earned or GPA on the graduate record.

Points. To compute the quality of work done, points are assigned to letter grades as indicated above for credits earned at the university.

Grade Point Average

The grade point average (GPA) for graduate students is computed by dividing the total points earned in graduate courses by the total semester hours of graded graduate courses at CMU and graded A through E on the qualitative scale. Courses to be included in the computation of the grade point average must be graduate level. Such courses include all courses at or above the 500 level and those 300 and 400 level courses which have been specifically approved for a student’s graduate program. Credits graded CR/NC at this university and credits accepted in transfer from other institutions are not included in the computation.

Academic and Retention Standards

In order to obtain a graduate degree, a student must have at least a 3.0 (B) cumulative graduate grade point average, and a cumulative graduate grade point average of 3.0 (B) in all course work on the student’s authorized degree program. The policies which follow deal with cumulative graduate grade point average; Graduate Studies monitors overall graduate grade point averages and follows these procedures when a student’s cumulative graduate grade point average is below a 3.0. When a student’s cumulative graduate grade point average in the academic program falls below a 3.0, the student’s academic file is reviewed by Graduate Studies. Graduate students are given one semester after being placed on academic probation to raise their cumulative graduate GPA to the required 3.0.

All students are expected to raise their cumulative graduate GPA to a 3.0 within two semesters of being placed on probation. When they are successful in achieving this goal, they will be removed from probation. If a student does not raise his/her cumulative graduate GPA to a 3.0 within two semesters of being placed on probation, the student will be dematriculated. If the student is in a degree program, the relevant department may specifically request an exception to policy. If Graduate Studies concurs, the student will be granted one more semester to raise his/her cumulative graduate GPA to a 3.0. However, three semesters beyond the first probation period is the limit on extension to the probation policy.

Given the time it takes to implement these procedures, it is possible that a student will be dematriculated after he/she has registered for classes and perhaps even started attending them. If that is the case, the student will be dropped from the classes.

In addition to maintaining a satisfactory cumulative grade point average, students in graduate programs must abide by the university’s “Academic Integrity Policy”, which specifically prohibits “plagiarism, cheating and other forms of dishonest or unethical behavior...” Violations of the Academic Integrity Policy may lead to sanctions as described in the policy.

In addition, departments involved in clinical programs may evaluate students on the basis of their ability to relate successfully with clients. Students who do not meet the professional standards established by departments may be placed on probation, suspended, or dismissed from a program.

In cases where a student fails to satisfy departmental graduate program requirements, Graduate Studies, upon the recommendation of the advisor and the departmental chairperson or program coordinator, and after review of the student’s academic progress, may remove the student from the graduate program. Examples of specific departmental requirements to be met by students include, but are not limited to the following: (1) writing competency; (2) the number of attempts made in passing comprehensive or qualifying exams; (3) the completion of required papers or theses; and (4) meeting university and departmental time limitations.

Students dismissed from graduate study, regardless of whether they were non-degree students or students pursuing a graduate certificate or degree, may petition for readmission no sooner than one academic year after the semester they were dismissed. Exceptions to this waiting period may be granted by Graduate Studies. A dismissed student may apply for either non-degree admission or admission to a graduate program. Admission as a non-degree student will be decided by Graduate Studies. Admission to a graduate program will be decided by the procedures normally used for that program.

("Semester" refers to semester for which the student registers. For example, "the first semester" refers to the first semester for which the student registers to take classes. A student may request that the two summer sessions be treated as a single semester.)
Credit/No Credit (CR/NC)

Courses in which graduate student performance is evaluated CR/NC, rather than by a letter grade on the A through E scale, carry the designation “CR/NC only” in the departmental course descriptions. CR indicates that the student has performed at a level equivalent to or above the grade point average for graduation (B grade) and shall receive credit in the course. NC indicates that the student has performed at a level lower than a B and shall not receive credit. In either case, the title and other course identification and the symbol CR or NC shall be entered on the student’s transcript. CR and NC are not equated with qualitative letter grades, however, and are not included in computation of the student’s grade point average. Optional registration for Credit/No Credit in other graduate courses is not available to graduate students.

Optional registration for Credit/No Credit is available to graduate students who register in a course below the 500 level for undergraduate credit. Courses taken under this provision may not be applied to graduate certificate or degree requirements. Such optional registration for undergraduate credit is not available to students removing deficiencies specified in their Conditional Admission. The courses for which graduate students may register for undergraduate credit on a CR/NC basis must be designated in the Class Schedule/Course Offerings and Search by the department as available on a CR/NC option basis. Procedures for registration, grading, and recording are explained in the CMU undergraduate Bulletin under Credit/No Credit Policy.

Incomplete Grades (I)

An incomplete (I) 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. 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 his or her ability to complete the remaining work without re-registering for the course. It is not to be given to a student who is already 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 the grade of I also submits to the department chairperson a formal statement 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 complete 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 grade of I. 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. A grade of I may not be removed by registering again for the course.

If the instructor of the class in which the grade of I was incurred is no longer a member of the faculty, then the student should contact the department chairperson, who shall act on behalf of the former instructor.

Deferred Grades (Z)

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 to the department chairperson, on the proper form, a statement 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.

Repeat Course Policy

To improve a grade previously earned at CMU, a student may repeat any course except an Independent Study course up to two times at the graduate level. The last grade and credit hours earned at CMU must completely replace the previous grade and credit hours in computing the grade point average, although the earlier record remains a part of the student’s transcript. A grade of A through E must be earned in a repeat course to replace the previous grade in computing the average.

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 his/her 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 his/her 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 his/her 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, he/she 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 written statement explaining the basis for the allegation that the grade was the result of capricious grading and presenting any evidence he/she 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 written statement 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 may be arranged for a student 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, he/she shall be disqualified from considering the appeal.*

**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.

**Independent Study and Thesis**

Not more than a total of ten hours of independent study and thesis shall be allowed on any master's degree program. Exceptions to this regulation may be granted by the Vice President/Dean of the Office of Research and Graduate Studies.

**Graduate Transfer Credit Policy**

This policy relates to non-CMU coursework being considered for transfer into a CMU graduate degree program plan.

**Transferable Credit:**
- **Graduate Certificate:** maximum of 6 semester hours from a previous or concurrent graduate degree or certificate may be transferred toward a graduate certificate.
- **Master’s Degree:** maximum of 50% of the semester hours (exception: maximum of 30 semester hours on the 54 credit hour joint master’s degree in history are transferable).
- **Specialist’s Degree:** maximum of 12 semester hours beyond the master’s degree if the master’s degree was earned at CMU (exception: maximum of 9 semester hours beyond the master’s degree if the degree was not earned at CMU).
- **Doctoral Degree:** maximum of 50% of the post-baccalaureate semester hours. Minimum percentage that must be earned at CMU can vary among academic programs.
- **Maximum of 6 semester hours** may only once be transferred from one earned degree program to another master’s or higher degree program.
- **Military coursework:** coursework with a grade of outstanding or excellent is transferable.

A separate policy exists for the following: Students entering the Au.D. with a master’s degree in Audiology and significant, relevant professional experience. See the Au.D. program description for details. Global Campus students are limited to six semester hours or prior learning according to California regulations.

Graduate transfer credits must be appropriate to the student’s program, recommended by the student’s academic advisor for use on the program plan, and approved by the Vice President/Dean of the Office of Research and Graduate Studies. Transfer credits are not considered in the computation of the student’s graduate grade point average. Graduate transfer credit must meet the following criteria:

1. Credits must have been earned at a regionally accredited higher education institution or one of the recognized standing (at the time the credits were earned) as defined by the Office of Research and Graduate Studies;
2. The credits are not in violation of any pertinent university or Office of Research and Graduate Studies regulation, procedure, or policy;
3. The credits do not correspond to a course previously taken at CMU;
4. The credits were earned within the time limit for program completion. Credits from a prior graduate degree or certificate that are to be applied to a doctoral degree may be exempt for the time limit for doctoral degree completion (see individual program description);
5. The credits are appropriate to the student’s program and are not in conflict with credit limitation specified elsewhere in the Graduate Bulletin;
6. As certified on the official graduate transcript, courses must be at the graduate level.
7. The grade for the credits must be B or higher. Ungraded coursework will not be accepted in transfer unless accompanied by evidence that the work was of B or higher quality; Military coursework with a grade of outstanding or excellent is transferable.
8. The student is in good standing (3.0 cumulative graduate GPA or higher) at the institution at which the credit was earned.
9. Doctoral degree students must have regular admission to their degree program;
10. The student is responsible for having official graduate transcripts sent by the institution in which the credit was earned directly to Graduate Student Services at CMU and for completing the most recent version of the Graduate Transfer Credit Request form (available online at www.grad.cmich.edu under New and Current Students: Applications and Forms).
11. The credits must be approved by the student’s academic advisor (for graduate certificates and Master’s degrees) or Program Director (doctoral degrees) and the Vice President/Dean of the Office of Research and Graduate Studies.

12. Courses earned by correspondence will be eligible for graduate transfer credit unless otherwise stipulated in department admission requirements.

13. Transfer credits must be earned within the time limit for program completion. Transfer credits are not eligible for extension of time consideration.

Transfer credits are not included in the computation of the student's CMU graduate grade point average.

**Waiver of a Program Requirement**

An advisor/program director has the authority to waive a program requirement only if the proposed waiver is not in violation of any pertinent university regulation, procedure, or policy. Circumstances under which a course might be waived include:

1. The student has already met the required course objectives through some experience which was not in the form of a transferable course;
2. The student has not met the objectives of the course, but the advisor/program director determines that the student would derive greater benefit from a different course.

If a program requirement is waived, the minimum number of hours required for the program is unaffected.

A separate policy exists for students entering the Au.D. with a master’s degree in Audiology and significant, relevant professional experience. See the Au.D. program description for details.

**Additional Master's Degrees**

A student who holds a master's or higher degree may earn an additional master's degree in another discipline. With the approval of the department chairperson and the graduate dean, a student holding a degree in a discipline may earn another master's degree in the same discipline, provided it is on a different published option. In any case, a maximum of six semester hours submitted in fulfillment of the prior degree program at CMU or elsewhere may subsequently be transferred to another master's degree program, provided the hours apply to the stated requirements of the subsequent program and were earned within seven years of the student's completion of the additional degree.

**Credit by Examination**

A student who has been admitted to a graduate degree program and who has had experience or background comparable to a course at this university may file for a maximum of 12 semester hours of Credit by Examination under the following conditions:

1. No credit transferable to CMU has been earned in the course requested by examination;
2. No advanced placement has 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 which semester to take a particular course.
5. Graduate credit by examination is available as Credit/No Credit only, and is not included in the computation of the student's grade point average.

At the time of the request, the student must have an Authorization of Degree Program signed by the advisor on file in Graduate Student Services. Approval may be granted for the number of credits requested or any portion of the credits requested. The student should submit the signed application for credit by examination to the Registrar's Office to register for the number of credits approved. The Credit by Examination Request form may be found on the Graduate Studies website.

**General Course Information**

**Course Numbers**

- **Courses numbered 500 through 599.** A student who has been admitted to graduate studies and who takes courses numbered 500 and higher will receive graduate credit.
- **Courses numbered 600-699.** Graduate courses open only to students who have been admitted to Graduate Studies, and to students in the Honors Program who present appropriate identification.
- **Courses numbered 700-799.** Graduate courses open only to students who have been admitted to Graduate Studies.
- **Courses numbered 800-899.** Graduate courses open only to students who have been admitted to Graduate Studies and who are at the post-master’s level or are completing a full-time internship at the specialist’s level.
- **Courses numbered 900-999.** Graduate courses open only to doctoral students who are in the last years of their program.

**600-Level Course Policy for Undergraduate Students.** Open only to students who have been admitted to Graduate Studies, to students on the Honors Program who present appropriate approval, and to students who are approved by their advisor, course instructor, chairperson of the department offering the course, and Graduate Studies. In granting approval, Graduate Studies will rely on the criteria for admission to the Honors Program.

**Cognate Courses**

A cognate course is one outside of but related to the principal discipline.

**Substitutions**

Course substitutions appropriate to the student’s program may be authorized by the advisor.

**Prerequisites**

A student may register for a class only if he or she has met the prerequisites prescribed or the requirements stated in this Bulletin. Procedures for granting exception vary by graduate program. Students should check with their department chairperson or graduate program coordinator to determine waiver procedures for their program.

In general, only immediate prerequisites for courses are listed. 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 permission. 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, 115.
- **Compound requirements** are separated by a semi-colon. Example: ART 105, 115; Admission to the Teacher Education Program.
- **Alternative courses** are separated by “or” Example: ART 105 or 115.
- **Multiple alternative courses** are preceded by the use of “One of:”. Example: One of: ART 105, 115, 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.

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.

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
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.

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).

Distance Learning Courses
Distance learning courses include web-based courses, learning package courses, and other courses that do not have the traditional face-to-face classroom format. Course approved for offering in a distance learning format are identified in each department's course listing section.

Other Designation
• CR/NC Credit/No Credit, see index for more information.
• Courses are listed in alphabetical order by designator.

Additional Academic Programs
Michigan Intercollegiate Graduate Studies (MIGS)

The Program. The Michigan Intercollegiate Graduate Studies (MIGS) program enables graduate students who are in good standing in a degree program to elect courses at various graduate schools in Michigan, with the approval of both Host and Home faculty. This program for guest scholars enables graduate students to take advantage of unique educational opportunities throughout the state. The schools participating in MIGS include: Andrews University (Berrien Springs), Aquinas College (Grand Rapids), Calvin College (Grand Rapids), CMU, Eastern Michigan University (Ypsilanti), Grand Valley State University (Allendale), Madonna University (Livonia), Marygrove College (Detroit), Michigan State University (East Lansing), Michigan Technological University (Houghton), Northern Michigan University (Marquette), Oakland University (Rochester), Saginaw Valley State University (University Center), Siena Heights College (Adrian), University of Detroit Mercy (Detroit), University of Michigan (Ann Arbor), Wayne State University (Detroit), and Western Michigan University (Kalamazoo).

Procedures. The Home Institution is where the student is currently enrolled in a graduate degree program; that is, CMU. The Host Institution is where the student wishes to be a guest.

The student and academic advisor initially decide if the course(s) are appropriate to the student's program of study and not available at his/her Home Institution. Then the advisor discusses the plan with the appropriate faculty members at the Host Institution. The Host Department is consulted to ensure that space is available for enrollment. Next the student obtains a MIGS application from Graduate Studies at CMU. The academic advisor and the Vice President/Dean of the Office of Research and Graduate Studies sign the application to indicate that the student is qualified and eligible, and Graduate Student Services forwards the application to the Host Institution for completion. Once the admission has been approved by the Host Department, the MIGS Liaison Officer at the Host Institution issues admissions documents and provides registration instructions, and forwards a copy of the admission letter to the Home Institution.

Policies. The following policies apply to students participating in the MIGS program:
1. Students on a MIGS enrollment pay tuition and other fees normally charged by the Host Institution for the services rendered;
2. All credits earned under a MIGS enrollment will be accepted by CMU as if offered by CMU;
3. Grades earned in MIGS courses will be applied toward the student's grade point average for the purpose of determining academic standing and eligibility for graduation;
4. A student may combine a part-time enrollment at CMU with a part-time MIGS enrollment, with approval of the student's academic advisor;
5. Enrollments are limited to six credit hours for master's or specialist's degree students or nine credit hours for doctoral degree students; and
6. The student is responsible for arranging to have transcripts certifying completion of work under a MIGS enrollment forwarded to CMU.
Global Campus

A major 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. Global Campus was established in 1971 as the Institute for Personal and Career Development to help meet that goal.

Global Campus uses flexible scheduling, compressed class formats and a sophisticated and comprehensive network of program centers in nearly 20 states and in Canada and Mexico to offer graduate and undergraduate degree programs to thousands of adult students each year.

Global Campus combines the university’s high academic standards with innovative teaching technologies and strategies. Global Campus is prepared to:

- Translate career and other forms of prior learning into academic credit.
- Provide flexible instructional, curricular and scheduling patterns.
- Tailor programs through individualized advising.
- Provide for wide use of internships, independent study, and other forms of individualized study.
- Utilize various distance education media.

In addition to complete degree programs, students may also earn credit for individual courses offered through Global Campus each semester at locations across Michigan and online. Many of the courses are designed to assist professionals in meeting certification regulations, to provide credit-bearing in-service opportunities, and to offer convenience to working adults who want to take courses toward various campus degree programs. The schedule for CMU Online courses has been combined with the schedules of educational opportunities at the various Global Campus sites in Michigan and together they provide enrollment, registration, advising, and other pertinent information for Global Campus students.

Curricular Offerings

Academic programs available through Global Campus provide a wide range of educational experiences necessary for the attainment of undergraduate degrees, graduate degrees, certificates, and doctoral degrees.

Prior Learning Assessment Program

The Prior Learning Assessment Program provides academic recognition of college-level skills and knowledge acquired outside the formal college classroom. 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-off-the-job instruction or special schools.

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.

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, 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 should be directed to staff at cmuonline@cmich.edu or (989) 774-1129.

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: http://global.cmich.edu/cmuonline/about.

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 beginning 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. 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. Students may not withdraw after the midpoint of the course. Students who cease/fail to participate or log into their online class and have not formally withdrawn from the course will receive the grade earned in the course. A bill-back in financial aid received may be incurred based on the student’s last date of academic participation in the class.

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 the student’s last day of attendance. See Scholarships and Financial Aid section of this Bulletin for additional information.

Faculty and Advisors

The distinctive character of flexible offerings and course scheduling by Global Campus attracts recognized leaders in a number of fields who serve as instructors and advisors. Instruction is provided by university faculty and by faculty drawn from universities throughout the nation. Instructors are also selected from the executive ranks of government, business and industry and are individually appointed on a contract basis for each class.

In addition to its full-time advising staff, Global Campus Programs especially selects academic advisors from its pool of qualified instructors, all of whom are approved to teach based on the same rigorous standards applied to campus faculty. Academic advisors are official representatives of the university. Advisors work closely with students to create an individual program plan each student must use as a guide to attain his or her academic goals.

Library Services

Global Campus makes the extensive CMU libraries’ resources available to students and faculties through its Global Campus Library Services (GCLS) Program.

GCLS is staffed with professional librarians, support staff and student assistants who work closely with Global Campus students and faculty to meet their information needs. GCLS librarians provide reference assistance including direction to appropriate materials for course research assignments; explanation of the use of library print materials and electronic databases and answers to specific reference questions. Librarians also visit classes to explain GCLS and to provide instruction in research methods.

GCLS provides toll-free telephone and fax numbers, e-mail and fax addresses which enable students to request the loan of any circulating book in the library, photocopies of articles in journals held in the library, and reference assistance from the librarians. Requests for specific materials are processed with the goal of meeting a 24-hour turnaround time from the time the request is received until it is ready to be mailed from campus.
Servicemember’s Opportunity College

Central Michigan University recognizes the unique nature of the military lifestyle and is committed to ensuring the transfer of relevant credits, scheduling courses at convenient times and locations, offering online courses, and providing credit opportunities for prior learning experiences and military education relevant to the degree. In keeping with these goals, CMU supports the Servicemember’s Opportunity College (SOC) Consortium, an organization jointly developed by educational representatives of each of the Armed Services, the Office of the Secretary of Defense and a consortium of leading institutions of higher education, to provide flexibility to service members, their families, and veterans seeking college degrees.

Bulletin

Students participating in programs offered through Global Campus should refer to the current Global Campus Bulletin for regulations and fees.

Non-Degree and Non-Credit Programs

Global Campus 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. For further information about the DDPD program, please contact Global Campus at 800-950-1144, ext. 4477.

Non-Credit Options

Corporate and Executive Development

Global Campus is able to partner with corporations to assist them with the learning and development needs within their organizations. Services include training, content collaboration, consulting services, organizational assessments and more. For further information, please contact 800-950-1144, Ext. 7137.

Community Programs

What you are looking for may be offered through Global Campus. A variety of offerings are available for youngsters and high school students including community music school, summer music camp, and color guard/drum major camps. For further information, please contact 800-950-1144, ext. 7137.

Life-Long Learning

If you are interested in adventures in lifelong learning, look no further than active travel programs through Elderhostel. 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. For more information about CMU offerings, please contact 800-950-1144, ext. 7129.
School of Accounting (ACC)

College of Business Administration

Chad Stefaniak, Chairperson
312 Grawn Hall, (989) 774-3796

Robert G. Bromley, Ph.D., CPA, Information Systems
Steve Harrast, Ph.D., Information Systems
William C. Hood, J.D., CPA, Tax Accounting
Philip L. Kintzele, D.B.A., CPA, Financial Accounting and Governmental Accounting
Vernon E. Kwiatkowski, D.B.A., CPA, Governmental Accounting
Debra McGilsky, Ph.D., CPA, Tax Accounting
Chad Stefaniak, Ph.D., CPA, Auditing
Thomas R. Weirich, Ph.D., CPA, Auditing, Financial Accounting

Master of Business Administration (MBA)

See the College of Business Administration for information.

Course Descriptions: ACC

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, 302; 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor; or Graduate status.

ACC 511 Federal Income Tax II 3(3-0)
Introduction to federal income taxation of individuals, partnerships, corporations, estates, and trusts, deduction, depreciation, and other procedural and substantive issues. Prerequisites: ACC 311; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

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 Professional Business Studies or listed on signed 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 decedents final income tax return. Prerequisites: ACC 311; 56 semester hours completed; admission to Professional Business Studies or listed on signed 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; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor. Recommended: MGT 340.

ACC 524 Budgeting: Planning and Control 3(3-0)
Intensive study of budgeting for both profit and non-profit organizations. Prerequisites: ACC 321, FIN 332; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

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. Prerequisites: signed major authorization in accounting; completion or concurrent enrollment in ACC 370; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 533 Auditing Procedures and Statistical Sampling 3(3-0)
Auditing programs, work paper techniques, procedures, and statistical sampling. Prerequisites: ACC 331 with a grade of B- or better; BIS 221; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 535 EDP Auditing and Control 3(3-0)
EDP auditing including controls, applications, software, systems, and service center records. Prerequisites: ACC 331, BIS 221; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 536 Forensic Accounting 3(3-0)
The study of financial fraud and the methods of fraud detection, investigation, and prevention. Prerequisites: 75 semester hours completed; admission to Professional Business Studies or graduate status.

ACC 543 Fund Accounting 3(3-0)
Accounting principles and procedures for governmental units and various non-profit organizations. Prerequisites: ACC 302; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 550 Internal Auditing 3(3-0)
Introduction to internal auditing as an internal control. Standards, ethics, concepts, techniques, and reporting practices relevant to financial, compliance and operational auditing. Prerequisites: signed accounting major or minor; 56 hours completed; admission to Professional Business Studies.

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; 56 semester hours completed and admission to Professional Business Studies; or listed on signed major or minor; or graduate students, permission of the MBA Director.

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 Professional Business Studies or listed on signed major or minor.

ACC 605 Accounting Theory I 3(3-0)
Various theories of income measurement and asset valuation. Roles of policy making bodies in formulating accounting and reporting standards. Basic objectives and elements of financial statements. Prerequisite: ACC 501 or concurrent enrollment in 501.

ACC 689 Accounting Internship 3(Spec)
Full time, on-the-job work experience for one semester in industry, government, or public accounting arranged through departmental internship supervisor. A research paper relating to the student's work experience obtained on the internship is required. CR/NC only. Prerequisites: 12 hours of accounting, overall GPA of 3.2, accounting GPA of 3.2, acceptance by program supervisor.

ACC 711 Tax Seminar 3(3-0)
Development of tax principles and tax law; tax research methods; alternatives for tax law changes; effects of taxes in business decisions; tax administration and practice. Prerequisites: ACC 311, ACC 302; ECO 600.

ACC 721 Managerial Accounting Seminar 3(3-0)
Detailed analysis and discussion of controversial and contemporary problems and issues in managerial accounting. Prerequisites: ACC 321, FIN 332; ECO 600.

ACC 730 Configuration, Control & Implementation of Global Accounting Systems using GRC 3(3-0)
Basic conceptual framework, design, implementation, and control of enterprise resource planning systems. This course is approved for offering in a distance learning format. Prerequisites: MBA 619.

ACC 731 Auditing Seminar 3(3-0)
Analysis and evaluation of current thought and prospective developments in auditing. Emphasis on philosophy, standards, concepts, postulates, and problem areas. Prerequisites: ACC 370, ACC 531; STA 282.

ACC 741 Fund Accounting Seminar 3(3-0)
Coverage of current developments and trends in areas of concern in nonprofit entities including special studies or problem areas and potential solutions. Prerequisite: ACC 543.

ACC 753 Independent Studies 1-3(Spec)
Directed research or reading on an approved topic. Prerequisites: 15 hours of graduate credit and instructor approval. Not more than 3 credits for ACC 753 may count toward accounting concentration.

ACC 791 Special Topics in Accounting 1-3(Spec)
Advanced topics in accounting. Prerequisite: permission of instructor. No more than 3 credits for ACC 791 may count toward accounting concentration.
Department of Art and Design (ART)
College of Communication and Fine Arts

Larry Burditt, Chairperson
132 Wightman Hall, (989) 774-3025
Scott de Brestian, Ph.D., Art History
Jesse Dominguez, M.F.A., Painting
Brian Elder, M.F.A., Painting
Clark Most, M.F.A., Graphic Design
Johanna Paas, M.F.A., Printmaking
Sally Rose, M.F.A., Fibers
Jonathon Russell, M.F.A., Graphic Design
Kris Sanford, M.F.A., Photography
David Stairs, M.F.A., Graphic Design
Margaret Ware, M.F.A., Sculpture
Al Wildey, M.F.A., Photography

Course Descriptions: ART

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: ART 405.

ART 510 Advanced Ceramics 3-12(Spec)
Emphasizes problems relating to concepts of forms and surface as well as technical information pertaining to firing and glazing. A student may take this course four times, for 3 hours of credit each time. Prerequisite: ART 410.

ART 517 Advanced Figure Drawing Studio 1-12(Spec)
An individualized studio experience with emphasis on the human figure that would include problems in foreshortening, placement, and composition. Prerequisite: ART 416.

ART 533 Advanced Painting Studio 1-12(Spec)
An individualized studio experience for the advanced student of painting leading to artistic achievement and professional development. Prerequisite: ART 430.

ART 535 Digital Multimedia for Designers 3(0-6)
The design and visual development of multimedia using a variety of authoring tools. Prerequisites: ART 358, ART 438, and a 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 342, 441.

ART 551 Advanced Printmaking Studio 1-12(Spec)
An individualized studio experience in printmaking beyond ART 450 competency. Development of a fine art print portfolio. Prerequisite: ART 450 or 9 hours of printmaking credit and graduate standing.

ART 556 Independent Studio 1-12(Spec)
An individualized studio experience determined in consultation with a faculty member. Prerequisites: minimum 56 credit hours or graduate standing.

ART 575 Surface Design on Fabric II 3(0-6)
Advanced techniques and aesthetics for the application of image, patterning, and color with dyes and pigments through silkscreen, batik, paints, resists, and transfers on fabric. Prerequisites: ART 375 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 taken for graduate credit. Prerequisites: ART 283, 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. Prerequisites: ART 285, 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 or 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 taken for graduate credit. Prerequisites: ART 285, 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. Prerequisites: ART 106 and permission of instructor.

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. Repeatable up to 9 hours when content does not duplicate previous topics. Prerequisites: ART 319; additional 6 hours of 300+ level art history courses.

ART 589 Research Seminar in Art History 3(3-0)
Seminar supporting research projects in art history. Must be taken in one of the last two semesters prior to graduation. May be taken for graduate credit. Prerequisites: 3 credits of 500-level art history and signed Art History major; or graduate standing.

ART 597 Special Studies 1-6(Spec)
Further in-depth graduate study when scholarly/studio adequacy beyond ART 497 is achieved.
The Department of Biology supports teaching and research activities with excellent multi-user resources, including a microscopy facility with confocal, transmission electron and scanning electron microscopes; and a natural history and herbarium collection. The Department also boasts a fleet of boats and research vehicles, a Biological Station on Beaver Island in northern Lake Michigan with diverse and pristine island habitat available for field-oriented research and laboratory studies, and Neithercut Woodlands, a 252-acre tract of mixed hardwood forest providing habitats suitable for both aquatic and terrestrial studies.

The CMU Biological Station on Beaver Island is an approved residence center for graduate work in biology. It is possible to fulfill some course requirements at the Biological Station.

A number of graduate teaching assistantships and graduate research assistantships are available on a competitive basis in the Department of Biology website. Application forms may be obtained from the Biology Department. The deadline for applications is February 1 each year for full consideration.

Graduate Teaching Assistantships (GTA) involve 8–9 hours per week instructing laboratory sections in beginning and advanced undergraduate courses plus assisting with laboratory preparation. During the academic year, GTAs receive a competitive stipend, all fees paid and a 20 credit tuition scholarship.

Most Graduate Research Assistantships (GRA) are supported through faculty research grants or contractual agreements. A limited number of GRAs are available for 12 months with highly competitive stipends. Raymond E. Hampton Excellence in Biology Research Award Established in 1994 in recognition and appreciation of Dr. Hampton, who served 24 years as professor of biology at CMU. This merit-based award will recognize second-year biology graduate students identified as worthy of distinction to be used for a research project while at the CMU Biological Station on Beaver Island.

Daniel E. & Mildred G. Wujek Scholarship This scholarship recognizes an outstanding second-year botany or aquatic biology graduate student who has been identified as worthy of distinction. The award may be used for tuition, books, room and board at a biological station, and for research supplies and logistics. This endowment was established by CMU alumni Daniel E. and Mildred G. Wujek. Daniel Wujek was a faculty member in the CMU Department of Biology.

Marian Whitney Summer Graduate Scholarship Awarded to an outstanding graduate student who is completing a thesis in zoology. The award may be used to support the graduate student in the summer.

Master of Science (M.S.) in Biology Minimum Totals for Graduation: 30 - 36 hours

The Department of Biology offers both the Plan A and the Plan B Master of Science degree. Plan A requires completion of six to nine credit hours in BIO 798 (Thesis), one credit hour in BIO 730 (Seminar), 20 to 23 hours of graduate course work approved by the student's
advisor and advisory committee, and an oral defense of the thesis. Plan A is recommended to those students preparing for research-oriented careers or for doctoral study. Plan B requires the completion of 36 credit hours of graduate-level course work approved by the student’s advisor and advisory committee and a written and/or oral comprehensive examination over the course work. Students enrolled in the M.S. conservation concentration program may pursue a Plan A (thesis) option only.

**Admission Requirements, Retention & Termination Standards**

**Admission Requirements Snapshot**

- **GPA:** 3.0 (and 3.0 in major)
- **Entrance Exam:** GRE
- **International Application Deadline:** July 1 (Fall), Oct. 1 (Spring)

See Admission Requirement Details Below

To be eligible for Regular Admission to the graduate program in biology, applicants should have completed an undergraduate degree with a major in a biological science with a 3.0 or better grade point average in their major and a 3.0 GPA overall. Applicants will need to submit general GRE scores, statement of interests, transcripts, and three letters of recommendation as specified in the Biology Department Web page (https://centrallink.cmich.edu/academics/sci_tech/biology). In addition, chemistry is required while mathematics and physics are highly recommended. Admission to the program is contingent upon advisor acceptance. An applicant who does not meet the foregoing requirements may be granted Conditional Admission by the department graduate committee.

Fifteen credit hours (seminar and thesis or research in biology included) must be earned at the 600-level or above.

**Degree Requirements**

Select one of the following options:

**Biology - Plan A (30 hours)**

- **Required Courses (7-15 hours)**
  - BIO 500 - Biological Statistics 3(2-2)
  - BIO 630 - Art of Scientific Communication 2(2-2)
  - BIO 730 - Seminar 1(1-0)
  - BIO 798 - Thesis 1-9(Spec)
  - Note: Also requires oral defense of thesis.

**Electives I (13-23 hours)**

Select graduate course work approved by the student’s advisor and advisory committee.

**Electives II (0-10 hours)**

Additional courses in cognate areas selected in consultation with student’s advisor and advisory committee.

**Total: 30 Semester Hours**

**Biology - Plan B (36 hours)**

Thirty-six hours of graduate-level coursework approved by the advisory committee. Up to 10 hours may be in one or more cognate areas, subject to approval by the advisory committee. Students must submit an approved Plan B paper demonstrating either research, independent study, or internship. A comprehensive oral and/or written examination over the coursework administered by the advisory committee.

**Total: 36 Semester Hours**

**Biology: Conservation Concentration**

This concentration in Conservation Biology is designed to prepare students for career opportunities with state and federal agencies and conservation organizations. Fifteen credit hours (seminar and thesis or research in biology included) must be earned at the 600-level or above.

**Required Courses (7-15 hours)**

- BIO 500 - Biological Statistics 3(2-2)
- BIO 630 - Art of Scientific Communication 2(2-2)
- BIO 730 - Seminar 1(1-0)
- BIO 798 - Thesis 1-9(Spec)

**Note:** Also requires oral defense of thesis.

**Required Courses II (9-10 hours)**

- Conservation Concentration
  - BIO 650 - Population Ecology 4(3-2)
  - BIO 680 - Conservation Biology 3(3-0)

**Note:** A course in community ecology is also required.

**Electives (8-14 hours)**

Select course work approved by the student’s advisor and advisory committee.

**Total: 30 Semester Hours**

**M.A.T. Integrated Science**

This degree is an interdisciplinary program. Please see the index for the page number.

**M.S. and Ph.D. in Neuroscience**

These degrees are interdisciplinary programs. Please see the index for the page number.

**Ph.D. in the Science of Advanced Materials**

This degree is an interdisciplinary program. Please see the index for the page number.

**Ph.D. in Earth and Ecosystem Science**

This degree is an interdisciplinary program. Please see the index for the page number.

**Course Descriptions: BIO**

**BIO 500 Biological Statistics 3(2-2)**

An introduction to statistical methods with emphasis on concepts of descriptive statistics and central tendency, inferential statistics, one-way ANOVA and correlation/linear regression. Prerequisites: Graduate standing or twelve (12) hours of biology. 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 326 or graduate standing.

**BIO 502 Teaching Biology 3(2-3)**

Development of pedagogical content knowledge for teaching of secondary biology; required training course for prospective teachers of biology. Prerequisites: Completion of at least 22 credits of BIO coursework; GPA of at least 2.7 in BIO classes; admission to the teacher education 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 218.

**BIO 510 Fisheries Biology 4(3-2)**

Analysis of fish populations, management of fisheries resources, and other problems related to freshwater fisheries. Prerequisites: BIO 218.

**BIO 511 Aquatic Insects 2(1-4)**

Natural history and systematic of freshwater insects. Prerequisites: BIO 218 or graduate standing.

**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 218 or graduate standing.

**BIO 518 Animal Behavior 3(2-3)**

Behavior in invertebrate and vertebrate organisms related to genetics, morphol-

**BIO 519 Invertebrate Systematics and Ecology 4(2-4)**

A review of the evolution and ecology of invertebrates with emphasis on the identification, collection and conservation of organisms in the Great Lakes region. Prerequisites: BIO 218 or Graduate Student Standing. Recommended: BIO 340.

**BIO 523 Fresh Water Algae 4(2-4)**

Taxonomy, morphology, and ecology including analysis and collection methods.
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, S22.

BIO 525 Plant Ecology 4(2-4)
A study of plants emphasizing physical and biotic interrelationships, and factors which govern their distribution. Field work stressed. Prerequisites: BIO 340; a plant identification course highly recommended.

BIO 526 Limnology 3(3-0)
Examination of physical and chemical properties of lake ecosystems, diversity of aquatic organisms, cycling of essential nutrients, and flow of energy through freshwater food webs. Prerequisites: BIO 340. Recommended: CHM 120 or CHM 131 and 132 or CHM 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.

BIO 534 Endocrinology 3(3-0)
Hormones, their synthesis, secretion, and their mode of action. Prerequisites: BIO 392 or graduate standing.

BIO 536 Histology 3(2-3)
A study of the principle cells and tissues of humans. Prerequisites: BIO 218 and 392; or graduate standing.

BIO 537 Immunology 3(3-0)
A description of the biochemical and immunological mechanisms of the immune response. Emphasis will be placed on adaptive immunity activation, immunobiology, and immune system dysfunction. Prerequisites: BIO 324, 326, 392; CHM 342 or 346; or graduate standing. 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 324, 326 or Graduate Status in the Biology Department.

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 392; or graduate status.

BIO 541 Wildlife Biology and Management 4(4-2)
Presents the basic ecological principles and the varied techniques utilized in managing the wildlife resource. Prerequisite: Permission of instructor.

BIO 544 Developmental Biology 4(3-3)
Patterns and cellular/molecular mechanisms of embryonic development, emphasizing animals. Prerequisites: CHM 132 or 161. Pre/Co-requisites: BIO 324, 326.

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. Prerequisites: BIO 324, 326; CHM 345; Recommended: CHM 346.

BIO 546 Molecular Genetics Laboratory 4(0-3-3)
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 evolution, taxonomy, behavioral ecology, physiological ecology, conservation biology, and management as these relate to Class Mammalia. Prerequisites: BIO 392; or graduate standing.

BIO 550 Transmission Electron Microscope Technique 4(1-6)
Biological specimen preparation and examination. Photographic aspects of electron micrograph preparation.

BIO 552 Scanning Electron Microscope Technique 4(3-3)
Principles, practices and techniques of SEM, includes methods of specimen preparation and instruction in generating electron micrographs. Prerequisites: Graduate standing or BIO 330.

BIO 553 Confocal Microscopy 3(2-3)

BIO 554 Advanced Electron Microscopy 3(1-4)
Routine maintenance, alignment and optimization of a TEM and an SEM for high resolution micrographs, as well as advanced techniques in specimen preparation. Prerequisites: BIO 550, BIO 552.

BIO 556 Biological EDS Analysis 3(1-4)
Techniques for elemental analysis of biological specimens using an SEM with an EDS system. Prerequisite: BIO 552.

BIO 557 Dendrology 4(2-4)
The biology of woody plants including: identification, anatomy, physiology, systematics, and ecology. Students will learn Michigan native trees and shrubs and select cultivars. Prerequisites: BIO 203.

BIO 558 Natural Resources Management 2(Spec)
Research and management of fisheries, wildlife, forests, and wetlands through field trips and presentations by specialists. Prerequisites: Graduate status or BIO 340.

BIO 559 Field Botany 3(2-3)
The collection, identification, and preparation of herbarium specimens from the local flora. Prerequisites: BIO 203.

BIO 560 Avian Ecology 3(2-3)
Relationships among birds, community organization and ecology of birds are examined through investigative field work. Prerequisites: BIO 340 or graduate standing. Recommended: BIO 515.

BIO 561 Wetland Ecology and Management 3(3-0)
The study of wetland ecosystem structure and function. Chemical, physical, and biological processes will be put into the context of conservation, management, and restoration. Prerequisite: BIO 340.

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 570 Cellular Dynamics 3(3-0)
A course that explores advanced topics in cell biology focusing on landmark discoveries and experimental techniques using the primary literature. Prerequisites: BIO 324, 326; or Biology graduate status.

BIO 571 Cellular Dynamics Laboratory 1(0-3)
An advanced laboratory course that explores experimental techniques in cell biology research. This is a laboratory course that accompanies BIO 570. Prerequisites: BIO 324, 326; or Biology graduate status. Co-requisite: BIO 570.

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. Prerequisite: BIO 326 or graduate standing.

BIO 576 Animal Cell Culture 4(1-6)
Practical aspects of animal cell culture, involving media preparation, aseptic manipulation of cell culture, cell maintenance, and cell storage. Recommended: BIO 392.

BIO 580 Medical Microbiology 4(2-4)
Focuses on relationships between humans and pathogenic microbes. Covers major groups of medically important microorganisms, pathological consequences of infection, diagnostic procedures, and clinical case problem-solving. Prerequisites: BIO 208; BIO 392 or HSC 215; 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 208, 340; 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 Neuropysiology 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 597 Special Topics In Biology 1-3(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. Prerequisite: See Course Search and Registration.

BIO 600 Biomedical Research Design and Analysis 3(2-2)
An examination of the proper design and statistical analysis needed to solve problems in laboratory and field biology. Recommended: BIO 500.

BIO 610 Biology Colloquium 1-9(Spec)
Advanced study of selected subject topics under faculty guidance through lecture and/or seminar colloquia in special competence areas of the graduate faculty. Prerequisite: permission of instructor.

BIO 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

BIO 620 Biology Practicum 1-9(Spec)
Practical experience in methodology and techniques in selected field or laboratory-oriented topics, offered in subjects related to graduate faculty specialties. Prerequisites: See Course Search and Registration.

BIO 626 Topics in Genetics 1-3(Spec)
Various advanced topics in genetics are covered which range from transmission genetics to molecular genetics and evolution. Student participation is expected. May be repeated as offered to maximum of 3 hours. Prerequisite: BIO 326.

BIO 629 Topics in Eukaryotic Molecular Genetics 1-4(Spec)
Practical aspects of animal cell culture, involving media preparation, aseptic manipulation of cell culture, cell maintenance, and cell storage. Recommended: BIO 392.

BIO 630 Art of Scientific Communication 2(2-0)
Exploration of methods involved in the writing of refereed scientific papers, grant proposals, theses and dissertations, and oral or poster presentations at scientific meetings.

BIO 635 Toxicology 3(3-0)
A study of toxic chemicals, their effects on living organisms, and the metabolism and fate of the chemical in the organism. Prerequisites: BIO 392, CHM 346, CHM 521, CHM 522.
BIO 637 Topics in Immunology 1-3(Spec)
Various topics in immunology are covered as lecture or readings from current literatures. May be repeated as offered to a maximum of 3 hours. Prerequisites: BIO 537.

BIO 642 Advanced Statistical Methods for Research 3(3-0)
Examines the assumptions and utility of statistical techniques used in research, with emphasis on applications in biology and multivariate techniques with complex datasets. Prerequisite: BIO 500.

BIO 650 Population Ecology 4(3-2)
Theoretical and realistic considerations of mechanisms affecting dynamics of plant and animal populations.

BIO 651 Topics in Ethology 1-3(Spec)
Discussion of various ethological topics from current literature. May be repeated as offered to a maximum of 3 hours. Prerequisite: BIO 518 and permission of instructor.

BIO 652 Behavioral Ecology 3(2-3)
An integration of behavior and ecology from the standpoint of species diversity, habitat utilization, reproduction, and competition. Field observations to illustrate principles of adaptation through behavioral channels. Prerequisites: BIO 340 and BIO 518.

BIO 653 Stream Ecology 3(2-3)
Structure and function of stream ecosystems with emphasis on biological processes. Prerequisites: BIO 340 or admission to Biology MS Program.

BIO 656 Fish Ecology 2(2-0)
A study of the ecological relationships of fishes. Prerequisites: BIO 509 or graduate status.

BIO 657 Fisheries Management 2(2-0)
A study of specific habitats as related to fisheries management, habitat alteration problems, alternative management solutions, special techniques, and specific management topics. Prerequisites: BIO 510 or graduate status.

BIO 658 Zooplankton Biology 3(2-3)
An examination of the taxonomy, physiology, behavior and ecology of planktonic animals. Prerequisites: BIO 218, 340.

BIO 670 Concepts in Biological Areas for Educators 3(2-2)
In-depth studies on organisms of a local park, museum, zoo, aquarium, garden or other related biological facility providing basic knowledge to communicate to others. Prerequisite: Admission in the NAT Integrated Science Program or Master of Arts in Education with 9 credits of Biology earned in the undergraduate degree.

BIO 680 Conservation Biology 3(3-0)
Addresses dynamics and problems of small populations and perturbed species, communities and ecosystems and practical aspects of implementing protection. Prerequisites: BIO 326, 340; or admission to the biology graduate program.

BIO 685 Phylogenetics 3(3-0)
Detailed study of phylogeny reconstruction, comparative evolutionary methods, and how to critically evaluate evolutionary studies. Prerequisite: Graduate standing in Biology or Earth and Ecosystems Science. Recommended: Prior coursework in plant biology, zoology, microbiology and genetics.

BIO 690 Conservation Genetics 4(3-3)
Students learn technical and theoretical genetic methods used in conservation while generating, analyzing and interpreting data to generate sound scientific conclusions.

BIO 691 Landscape Ecology 4(3-3)
Technical and theoretical foundations of landscape ecology as applied to conservation biology, including use of GIS tools. Prerequisites: Completion of, or concurrent enrollment in, BIO 680, BIO 500 or STA 382; GEO 203, 303.

BIO 692 Topics in Physiology 1-4(Spec)
Seminars, technique courses or lecture courses on new frontiers in physiology or of special interest. May be repeated for a maximum of 4 hours. Prerequisites: BIO 392.

BIO 695 Graduate Internship in Biology 1-6(Spec)
Prerequisite: A graduate internship agreement must be signed and on file in the Biology office or with the Director of the Biological Station at least four weeks prior to enrollment.

BIO 730 Seminar 1(1-0)
Formal, oral departmental presentation of the Plan A thesis research. Required of students receiving the M.S. in Biology, Plan A, CR/NC only. Prerequisites: Permission of thesis Committee Chair.

BIO 790 Research in Biology 2(4-Spec)
Acquaints the student with research techniques. Prerequisite: Registration requires the approval of the department chairperson. CR/NC only.

BIO 798 Thesis 1-9(Spec)
An acceptable thesis may be presented for six to nine hours of credit. CR/NC only. Prerequisite: Plan A thesis prospectus on file in the biology department office and approval of the department chairperson.

Course Descriptions: MAR
MAR 590 Special Problems in Marine Science 1-6(Spec)
Prerequisites: permission of instructor.
Master of Arts (M.A.) in Broadcast and Cinematic Arts

Minimum Totals for Graduation: 30 hours

The Master of Arts program in Broadcast and Cinematic Arts offers opportunities for both industry professionals seeking new skills and recent undergraduates desiring to pursue advanced study in electronic media or film theory and criticism. Students interested in the electronic media studies, electronic media management, or electronic media production concentrations should possess a professional or academic background in mass communication. Students interested in the film theory and criticism concentration should have a background in film, mass communication, speech, or literary studies.

Graduate students can complete coursework in formal classroom, seminar, and independent study settings, leading to an emphasis in:
1. electronic media studies,
2. electronic media management,
3. film theory and criticism, or
4. electronic media production.

Classes are taught by a faculty possessing diverse professional and theoretical backgrounds. In addition, many students supplement their studies with offerings from Interpersonal and Public Communication, Political Science, English, and Journalism. One-on-one advising and personalized course study with members of the graduate faculty make the Broadcast and Cinematic Arts M.A. program one of the most attractive in the Midwest.

For an application, catalog, and graduate assistant information contact the Graduate Coordinator-School of Broadcast & Cinematic Arts, 340 Moore Hall, Central Michigan University, Mount Pleasant, MI 48859.

Admission Requirements SnapShot
GPA: 2.7 Entrance Exam: N/A
Internat'l Application Deadline: July 1 (Fall), Oct. 1 (Spring)
See Admission Requirement Details Below

To receive regular admission to the program, a student must attain an undergraduate grade point average of 2.7 on a 4.0 scale. Additional preparatory course work or particular courses may be required. All students applying to the Electronic Media Production concentration in BCA must submit a skills-based resume and a demo reel of their best audio and/or video production work with their application.

International applicants must present a TOEFL score of at least 550 (213 CBT or 79 Internet or IELTS of 6.5).

Degree Requirements
Select one of the following concentrations:

Broadcast & Cinematic Arts: Electronic Media Studies
In consultation with the School of BCA graduate advisor, M.A. students may choose Plan A or B. Plan A consists of course work, thesis (6 hours), and oral defense of the thesis. The oral examination may also include subject matter related to course work.

Students on Plan B must satisfactorily complete an independent research project (3 hours) and an oral examination related to the independent research and course work.

Required Courses I (9 hours)
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)

Required Courses II (6 hours)
Select two of the following:
BCA 611 - Seminar in Telecommunications Media Policy 3(3-0)
BCA 612 - Electronic Media Seminar 3(3-0)
BCA 613 - Media Entrepreneurship 3(3-0)
BCA 625 - Film and Video Theory and Criticism 3(3-0)

Required Courses III (3-6 hours)
Select one of the following:
BCA 730 - Plan B Project Research 3(3-0)
BCA 798 - Thesis 1-6(Spec)

Electives (9-12 hours)
Select from the following:
BCA 503 - Critiquing Mass Media 3(3-0)
BCA 506 - Series Script Writing For Visual Media 3(3-0)
BCA 508 - Screenwriting for Cinematic Narrative 3(3-0)
BCA 510 - Electronic Media Law 3(3-0)
BCA 511 - Electronic Media Sales 3(3-0)
BCA 512 - Electronic Media Promotion 3(3-0)
BCA 515 - Sports Broadcasting 3(2-2)
BCA 516 - Electronic Media Management 3(3-0)
BCA 517 - Advanced Audio and Video Performance 3(2-2)
BCA 518 - Electronic News Reporting 3(2-2)
BCA 519 - Electronic Media Programming 3(3-0)
BCA 520 - Special Topics in Electronic Media 1-9(Spec)
BCA 521 - Advanced Electronic Cinematography 3(2-2)
BCA 522 - Multimedia Audio Post-Production 3(2-2)
BCA 524 - Producing Television News 3(1-4)
BCA 525 - Film Genre Study 3-9(Spec)
BCA 527 - Film Directors 3-9(Spec)
BCA 528 - History and Analysis of Nonfiction Film 3(2-2)
BCA 529 - Internship in Electronic Media-Media 2-6(Spec)
BCA 531 - Industrial and Educational Video/Media Production 3(2-2)
BCA 532 - Advanced Video/Multimedia Post-Production 3(2-2)
BCA 533 - Advanced Electronic Media Design 3(2-2)
BCA 540 - Recording Industry & Business 3(3-0)
BCA 560 - Radio Operations I 3(1-4)
BCA 561 - Radio Operations II 3(1-4)
BCA 566 - Hockey’s Cinematic Depictions 1(1-0)
BCA 611 - Seminar in Telecommunications Media Policy 3(3-0)
BCA 612 - Electronic Media Seminar 3(3-0)
BCA 613 - Seminar in Media Convergence 3(3-0)
BCA 619 - Continuing Registration for Final Research Project 1(1-0)
BCA 625 - Film and Video Theory and Criticism 3(3-0)
BCA 720 - Special Topics in Mass Media 3-9(Spec)
BCA 729 - Advanced Independent Study in Electronic Media 1-9(Spec)

Note: Students may take a maximum of 9 hours outside of BCA.

Total: 30 semester hours

Broadcast & Cinematic Arts: Film Theory & Criticism
In consultation with the School of BCA graduate advisor, M.A. students may choose Plan A or B. Plan A consists of course work, thesis (6 hours), and oral defense of the thesis. The oral examination may also include subject matter related to course work.

Students on Plan B must satisfactorily complete an independent research project (3 hours) and an oral examination related to the independent research and course work.

Required Courses I (15 hours)
BCA 528 - History and Analysis of Nonfiction Film 3(2-2)
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 625 - Film and Video Theory and Criticism 3(3-0)
Broadcast & Cinematic Arts: Electronic Media Production

Students on Plan B must satisfactorily complete an independent production project (3 hours) and an oral examination related to the independent research and course work.

Required Courses I (15 hours)
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 613 - Seminar in Media Convergence 3(3-0)
BCA 625 - Film and Video Theory and Criticism 3(3-0)

Required Courses II (9 hours)
Select three of the following:
BCA 521 - Advanced Electronic Cinematography 3(2-2)
BCA 522 - Multimedia Audio Post-Production 3(2-2)
BCA 531 - Industrial and Educational Video/Media Production 3(2-2)
BCA 532 - Advanced Video/Multimedia Post-Production 3(2-2)
BCA 533 - Advanced Electronic Media Design 3(2-2)
BCA 542 - Contemporary Recording & Mixing 3(2-2)

Required Courses III (3 hours)
BCA 730 - Plan B Project Research 3(3-0)

Electives (3 hours)
BCA 506 - Series Script Writing For Visual Media 3(3-0)
BCA 508 - Screenwriting for Cinematic Narrative 3(3-0)
BCA 515 - Sports Broadcasting 3(2-2)
BCA 517 - Advanced Audio and Video Performance 3(2-2)
BCA 518 - Electronic News Reporting 3(2-2)
BCA 520 - Special Topics in Electronic Media 3(3-0)
BCA 521 - Advanced Electronic Cinematography 3(2-2)
BCA 522 - Multimedia Audio Post-Production 3(2-2)
BCA 524 - Producing Television News 3(1-4)
BCA 525 - Film Genre Study 3(3-0)
BCA 527 - Film Directors 3(3-0)
BCA 528 - History and Analysis of Nonfiction Film 3(2-2)
BCA 531 - Industrial and Educational Video/Media Production 3(2-2)
BCA 533 - Advanced Electronic Media Design 3(2-2)
BCA 540 - Recording Industry & Business 3(3-0)
BCA 542 - Contemporary Recording & Mixing 3(2-2)
BCA 560 - Radio Operations I 3(1-4)
BCA 561 - Radio Operations II 3(1-4)
BCA 611 - Seminar in Telecommunications Media Policy 3(3-0)
BCA 612 - Electronic Media Seminar 3(3-0)
BCA 613 - Seminar in Media Convergence 3(3-0)
BCA 729 - Advanced Independent Study in Electronic Media 1-9(Spec)

Electives (9-12 hours)
Select hours from the following:
BCA 503 - Critiquing Mass Media 3(3-0)
BCA 506 - Series Script Writing For Visual Media 3(3-0)
BCA 508 - Screenwriting for Cinematic Narrative 3(3-0)
BCA 528 - History and Analysis of Nonfiction Film 3(2-2)
BCA 531 - Industrial and Educational Video/Media Production 3(2-2)
BCA 533 - Advanced Electronic Media Design 3(2-2)
BCA 542 - Contemporary Recording & Mixing 3(2-2)

Note: Students may take up to 6 credits of BCA 729 as an elective. BCA 560 and 561 are offered in Summer only.

Total: 30 semester hours

Course Descriptions: BCA

BCA 503  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. May be offered as Writing Intensive. Prerequisites: BCA 210 with a C or better or signed Cinema Studies minor or graduate standing.

BCA 506  Series Script Writing For Visual Media 3(3-0)
Techniques for creating episodic and serial scripts, emphasizing story structure, characterization, and creative team dynamics for electronic media series. May be offered as Writing Intensive. Prerequisites: BCA 210 with a C or better; ENG 201 with a B or better; limited to juniors or above; or graduate standing.
BCA 508 Screenwriting for Cinematic Narrative 3(3-0)
Techniques, formatting, and stylistic devices for writing and analyzing short- and feature-length cinematic narrative screenplays, emphasizing characterization, plot and structure. May be offered as Writing Intensive. Prerequisites: BCA 311 with a grade of C or better; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

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 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 210 with a grade of C or better; limited to juniors or above; or signed Electronic Media Sales Minor; 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. Prerequisites: BCA 210 with a C or better; BCA 311; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 515 Sports Broadcasting 3(2-2)
Overview of the sports broadcasting industry. Emphasis on tools and techniques of live broadcasting and play by play announcing. Prerequisites: BCA 210, 317 each with a C or better; or graduate standing in Broadcast and Cinematic Arts.

BCA 516 Electronic Media Management 3(3-0)
Discusses management in contemporary American electronic media settings. May be offered as Writing Intensive. Prerequisites: Limited to juniors or above; or graduate standing.

BCA 517 Advanced Audio and Video 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. Prerequisites: BCA 317 with a grade of "C" or better; or graduate standing in Broadcast and Cinematic Arts.

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 519 Electronic Media Programming 3(3-0)
Examination of electronic media programming in terms of recent trends and strategies. Emphasis on broadcasting and cable. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

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 Electronic 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 Multimedia Audio Post-Production 3(2-2)
Advanced recording, editing, sweetening, synchronizing and mixing of audio for picture in multimedia applications. Prerequisites: BCA 223, 421 with a grade of C or better in each; or graduate standing in Broadcast and Cinematic Arts.

BCA 524 Producing Television News 3(1-4)
A practical approach to producing news. Encompasses gathering, writing, producing, and directing news programming over local cable outlets. Prerequisites: BCA 318 or 223; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

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. This course may be offered in an online or hybrid format. 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 nine hours when content previously studied is not duplicated. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 528 History and Analysis of Nonfiction 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 2-6(Spec)
Directed work experience at participating media venues. May count 6 hours maximum toward a major; 3 hours toward a minor. Minimum 2.5 hours each quarter. Prerequisite: prior written approval of BCA Intern Director; limited to juniors or above; open only to signed BCA majors or minors.

BCA 531 Industrial and Educational Video/Media 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 Advanced Electronic Media Design 3(2-2)
Advanced examination of website production, streaming, and stored audio/video media, specifically for electronic media outlets. Emphasis on design aesthetics, application of theory, and website maintenance. Prerequisites: BCA 332; or graduate standing in Broadcast and Cinematic Arts.

BCA 540 Recording Industry & Business 3(3-0)
Exploration of the music record industry, music copyrights and music industry business strategies to reach consumers in the physical and online domains. May be offered as Writing Intensive. Prerequisites: Limited to juniors or above; or graduate standing.

BCA 542 Contemporary Recording & 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 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 561 Radio Operations 3(1-4)
Preparation and performance in radio broadcast practices, emphasizing radio programming and promotion principles. Summer Session II only. Laboratory hours arranged with instructor. Prerequisites: Minimum 2.25 GPA. BCA 222 or 317; BCA 560; or graduate standing in Broadcast and Cinematic Arts.

BCA 566 Hockey's Cinematic Depictions 1(1-0)
Focused practice in media criticism through analysis of the sport, business and aesthetics of hockey as depicted in benchmark fiction and non-fiction films. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 600 Introduction to Electronic Media Research and Writing 3(3-0)
Introduction to graduate-level academic writing and research design, focusing on vocabulary, syntax, and research theory and method components as they relate to electronic media. Prerequisites: Admission to the BCA graduate program.

BCA 601 Theories of Mass Communication 3(3-0)
Examination of theories and application of conceptual frameworks to the study of mass communication.

BCA 602 Mass Communication Research Methods 3(3-0)
Examination of quantitative and qualitative research methods applied to the study of mass communication.

BCA 603 Qualitative Mass Communication Research Methods 3(3-0)
Examination of qualitative research methods applied to the study of mass communication. Recommended: BCA 601.

BCA 604 Quantitative Mass Communication Research Methods 3(3-0)
Examination of quantitative research methods applied to the study of mass communication. Recommended: BCA 601.

BCA 611 Seminar in Telecommunications Media Policy 3(3-0)
Examination of the policies that impact the structure, functions and prospects of American electronic media systems. Recommended: BCA 601.

BCA 612 Electronic Media Seminar 3(3-0)
Directed readings of current issues and controversies in electronic media. Prerequisites: BCA 601; 602 or 604.

BCA 613 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. Prerequisites: BCA 601; BCA 602 or 603 or 604.

BCA 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements. Prerequisite: Graduate standing in Broadcast and Cinematic Arts.

BCA 625 Film and Video Theory and Criticism 3(3-0)
Study of the major theories of film and video emphasizing the reflective, transformational, and semiotic schools. Survey of various critical modes. Prerequisites: Graduate standing in Broadcast and Cinematic Arts.

BCA 700 Advanced Special Topics in Mass Media 3-9(Spec)
Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit, 9 hours. Prerequisites: One course in BCA numbered 500 and above, Graduate Standing in Broadcast and Cinematic Arts.

BCA 729 Advanced Independent Study in Electronic Media 1-9(Spec)
Intensive, specialized study under guidance of a faculty member or faculty committee. Prerequisites: Completion of appropriate contract proposal; Permission of advisor and instructor.

BCA 730 Plan B Project Research 3(3-0)
Advanced research for Plan B project. No more than nine credits may be earned in BCA 729 and BCA 730 combined. CR/NC only. Prerequisites: BCA 601, 602; permission of Plan B committee members based on satisfactory completion of research prospectus.

BCA 798 Thesis 1-6(Spec)
CR/NC only. Prerequisites: BCA 602; Permission of Graduate Advisor.
College of Business Administration (MBA, BUS)

Debasish Chakraborty, Director, MBA Program
250 Grawn Hall
(989) 774-3150

Departments
School of Accounting
Department of Business Information Systems
Department of Economics
Department of Finance and Law
Department of Management
Department of Marketing & Hospitality Services Administration

Master of Business Administration (MBA)

Minimum Totals for Graduation: 30 - 48 hours

The MBA program’s mission is to prepare graduate business students for leadership positions in today’s global economy. The program features an active student learning environment with a curriculum that meets the needs of both part-time and full-time students all over the world. Accredited by AACSB International - The Association to Advance Collegiate Schools of Business, the program is designed to meet the needs of three groups of people:

1. individuals whose business careers have focused on specialized areas and who seek to develop a more general management perspective in anticipation of further advancement;
2. individuals with previous education and work experience in areas other than business who seek a general business education that will allow them to move into management positions; and
3. individuals with limited work experience who plan to use the MBA as a foundation from which to begin their careers.

This program is approved for online delivery for the emphases in Information Systems, Logistics Management, and Value-Driven Organization, Marketing, and Human Resource Management.

The College of Business Administration offers the online program for working professionals who seek career-enhancing education but are not able to take classes in Mt. Pleasant. This online MBA is equivalent to our traditional MBA in that it has rigorous coursework from an AACSB International - The Association to Advance Collegiate Schools of Business - accredited business school.

In existence for over 40 years, the curriculum receives constant review to keep pace with emerging business trends. The graduate business faculty are not only well educated but also have substantial business experience. The faculty are committed to a program that emphasizes:

1. integration of the functional core areas of business;
2. providing the perspective required to manage in a global world;
3. awareness of ethical issues and standards and their influence on business decisions;
4. ability to work in teams through group projects and collaborative learning;
5. enhancement of oral and written communication skills integrating the most current technology;
6. application of theory and concepts to the solution of business problems through the use of cases, business exports, consulting projects, simulations and the study of real world business practice;
7. integration of business concepts in an applied project.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To be considered for admission to the MBA program, a student must first be admitted to Graduate Studies. The Application for Admission should be sent to the Office of Research and Graduate Studies, CMU, Mount Pleasant, MI, 48859 at least six weeks prior to the beginning of the first semester of anticipated enrollment in classes.

A Graduate Management Admission Test (GMAT) score must be on file in the College of Business Administration before an application for admission to the MBA program can be considered. Applicants lacking a GMAT score are granted non-degree admission to Graduate Studies. A student with non-degree admission may register for prerequisite courses only. To be admitted, students must have at least 1,050 points based on the formula: 200 times the cumulative undergraduate GPA plus a minimum GMAT score of 450. Applicants are expected to reflect the current MBA student body, which possesses an average formula score of more than 1, 150. International students must submit a GMAT score and submit a score of 213 (550 on paper-based test or 79 Internet-based test) or higher on the Test of English as a Foreign Language (TOEFL).

Regular Admission. To be granted regular admission to the Master of Business Administration program, a student must meet the university requirements for admission to Graduate Studies, possess an acceptable GMAT score and undergraduate GPA, and have successfully completed the prerequisite courses or equivalent.

Conditional Admission. Applicants who have satisfied the GMAT requirement, but are lacking only prerequisites are allowed to enroll in a maximum of 12 credit hours of MBA degree requirements while completing prerequisite requirements.

Any exceptions to the above admission requirements must be approved by the Graduate Studies Committee of the College of Business Administration.

Degree Requirements I (0-18 hours)

Foundation Courses (Prerequisites)

Applicants must present evidence of a working knowledge of advanced business applications in spreadsheet, database, and presentation graphics.

In addition, the following courses or equivalents may be completed before or after admission to the MBA program.

MBA 503 - Professional Business Communications 2(2-0)
MBA 504 - Using Financial Accounting Information 2(2-0)
MBA 505 - The Economic Environment of Business 2(2-0)
MBA 506 - Legal Environment of Business 2(2-0)
MBA 507 - Introduction to Marketing Management 2(2-0)
MBA 508 - Management and Organization 2(2-0)
MBA 509 - Production/Operations Management 2(2-0)
MBA 510 - Financial Management and Analysis 2(2-0)
MBA 511 - Statistics for Managerial Decisions 2(2-0)

Degree Requirements II (27 hours)

MBA Program Core Courses

MBA 610 - Managing Information Systems in a Global Economy 3(3-0)
MBA 620 - Managerial Accounting: A Management Perspective 3(3-0)
MBA 630 - Managing and Leading Individuals and Groups in Organizations 3(3-0)
MBA 640 - Data Analysis for Managers 3(3-0)
MBA 650 - Marketing-Based Management 3(3-0)
MBA 660 - Global Business and Sustainability 3(3-0)
MBA 670 - Financial Analysis and Risk Management 3(3-0)
MBA 680 - Global Economic Environment 3(3-0)
MBA 690 - Strategic Management: Integrative Experience 3(3-0)

Plan B Requirement. The Plan B requirement is fulfilled through successful completion of MBA 690.
Degree Requirements III (8-16 hours)

Areas of Emphasis

Select one of the following areas, to be approved by a graduate advisor:

- Accounting
- Business Economics
- Consulting
- Finance
- General Business
- International Business
- Information Systems
- Marketing
- Human Resource Management
- Value-Driven Organization
- Logistics Management (currently offered only online)

Minimum 35-43 Total Hours for MBA Degree
(35-61 hours, with prerequisites)

ACCELERATED MASTER OF BUSINESS ADMINISTRATION: ACCOUNTING EMPHASIS

Students admitted to the Master’s Degree Program who are studying an emphasis in accounting may earn up to six hours of credit for 500-level accounting courses taken. These courses will count both toward their undergraduate degree and toward their MBA Degree with an Accounting Emphasis.

Admission: Generally, students will apply during their junior year for admission into the Master’s Degree Program to begin Fall Semester in their senior year.

Admission Requirements: GPA of 3.25; and have completed ACC 302 and ACC 370; plus, meets the regular admission requirements of the MBA Program.

Plan of Study: For students admitted to the MBA with an accelerated Accounting emphasis, ACC 501 and ACC 531 with minimum grades of B will be counted toward both the undergraduate degree and will count as six hours of the eight elective hours on the MBA Degree with an Accounting Emphasis. At least one 600- or 700-level accounting elective, not including ACC 689, must be taken.

Course Descriptions: MBA

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 byphis 104, CPS 100 and prior knowledge of spreadsheet 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 spreadsheet software; admission to the MBA program OR both graduate status and 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 of 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.

MBA 609 Information Systems Management 2(2-0)

Examination of issues involved in managing and deploying information systems in organizations with an emphasis on technologies and human factors that support competitive strategies. Course is approved for offering in a distance learning format. Prerequisites: knowledge of advanced business applications in spreadsheets, database, and presentation graphics software, admission to the MBA program or permission of the MBA director.

MBA 610 Managing Information Systems in a Global Economy 3(3-0)

The management and deployment of information systems (IS) in organizations around the world, creating value from IS assets and exploring emerging technologies. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 618 Continuing Registration for Final Research Project 1(1-0)

A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

MBA 619 Accounting Information for Managers 2(2-0)

Investigates the central role accounting systems play in managerial evaluation, control, and planning. This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of the MBA director. Recommended: MBA 504, MBA 510, and BUS 600.

MBA 620 Managerial Accounting: A Management Perspective 3(3-0)

Investigates the central role accounting systems play in the planning, control, and decision making by managers. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 629 Managing Behavioral Change 2(2-0)

A study of organization culture and behavior which emphasizes the importance of and need for influencing individual and small group behavior in contemporary organizational settings. This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of the MBA director. Recommended: MBA 508.

MBA 630 Managing and Leading Individuals and Groups in Organizations 3(3-0)

A study of the frameworks used to understand and lead individual and group behavior and the processes used to create organization change. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 639 Quantitative Applications for Managers 2(2-0)

The application of quantitative methods to managerial decisions. Applications include optimization, modeling, and simulation, and focus on using the computer to support decision making. This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of the MBA director. Recommended: MBA 504, BUS 600, and knowledge of advanced business applications in spreadsheet software.
MBA 640 Data Analysis for Managers 3(3-0)
Understanding and applying quantitative methods of data analysis that facilitate getting information for business decisions from the raw data that business professionals have available. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 649 Marketing Management 2(2-0)
Dynamic nature and managerial aspects of marketing. Formulation of analytical decisions concerning marketing strategy. This course is approved for offering in a distance learning format. Prerequisites: Admission to the MBA program or permission of the MBA director. Recommended: MBA 503 and MBA 507.

MBA 650 Marketing-Based Management 3(3-0)
Dynamic nature and managerial aspects of customer-centric marketing. Formulation of analytical decisions concerning marketing strategy. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 659 Managing in a Global Economy 2(2-0)
Covers challenges of globalization of product- and factor-markets, managing subsidiaries and influencing affiliates in diverse cultures, in industrialized and emerging economics. This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of the MBA director. Recommended: MBA 508.

MBA 660 Global Business and Sustainability 3(3-0)
This course is designed to enable students to discuss and apply the major international business and sustainability issues and theories facing global managers. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 669 Financial Decision-Making 2(2-0)
This course provides a framework for the analysis of the investment and financing decisions of the firm and an understanding of how to apply finance theory to practical situations. This course is approved for offering in a distance learning format. Prerequisites: MBA 504, MBA 510, and BUS 600. Admission to the MBA program or permission of the MBA director.

MBA 670 Financial Analysis and Risk Management 3(3-0)
Course provides a framework for analysis of investment and financing decisions of the firm and understanding of how to apply finance theory to practical solutions. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 679 Economic Analysis for Managers 2(2-0)
Application of economics and statistics to business decisions. Integration of theory with issues from Business Week and The Wall Street Journal. Development of business regression models. Recommended: ECO 600 and BUS 600. Prerequisite: Admission to the MBA program or permission of the MBA director. This course is approved for offering in a distance learning format.

MBA 680 Global Economic Environment 3(3-0)
The global economy and its impact on managerial decision making. Economic growth, fiscal and monetary policy, trade, exchange rate determination, capital and financial flows. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 688 Directed Work/Observation/Internship 1(1-0)
Work or internship experience relevant to the MBA program. Prerequisites: Admission to the MBA program.

MBA 689 Strategic Management 2(2-0)
Focuses on developing competitive business strategies through a process of analyzing environments, establishing and implementing strategies, and evaluating results. This course is approved for offering in a distance learning format. Prerequisites: completion of 14 hours of MBA program including the following courses: MBA 619, MBA 649, MBA 659, and MBA 669. Admission to the MBA program or permission of the MBA director.

MBA 690 Strategic Management: Integrative Experience 3(3-0)
Focuses on integrative approach in developing competitive business strategies through a process of analyzing business environments, selecting and implementing strategies, and evaluating results. This course may be offered in an online or hybrid format. Prerequisites: Admission to the MBA program. Completion of MBA 620, 650, 660, and 670.

MBA 697 Special Topics 1-6(Spec)
Special topics of interest not included in courses currently listed in the Bulletin. Prerequisites: regular admission to the MBA program or permission of the MBA director.

MBA 699 The MBA Project 4(4-0)
The capstone experience where skills and competencies are applied to actual business problems. Students develop cross-functional business solutions with the guidance of a faculty committee. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: completion of 20 hours of the MBA program, including at least seven MBA-designated core courses at the 600-level. Admission to the MBA program or permission of the MBA director.

Course Descriptions: BUS

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 503 Business Process Improvement 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. Prerequisites: STA 282 or 382; 56 semester hours completed.

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 619 Voice of the Customer 3(3-0)
Examination of the marketing research methodologies utilized to capture the “voice of the customer” in a competitive marketplace. This course is approved for offering in a distance learning format. Prerequisites: Permission of the MBA director; graduate status.

BUS 629 Corporate Governance & Social Responsibility 3(3-0)
The study of corporate governance and social responsibility within the contemporary business world. This course is approved for offering in a distance learning format. Prerequisites: Permission of the MBA director and graduate status.

BUS 639 Process Improvement 3(3-0)
Process improvement as it relates to organizations within the contemporary business world. Methodologies, tools and techniques used for process improvement will be examined. This course is approved for offering in a distance learning format. Prerequisites: Permission of the MBA director; graduate status.

BUS 691 Management Consulting: Client Relations 2(2-0)
Development and maintenance of relationships between management consultants and their clients. Emphasis on change management principles. Prerequisites: Admission to Graduate Studies.

BUS 692 Management Consulting: Diagnosis 2(2-0)
Review of diagnostic techniques to assess organizational problems. Qualitative research and analytical techniques are also studied. Prerequisites: BUS 691; admission to Graduate Studies.

BUS 693 Management Consulting: Measurement 2(2-0)
Theory and managerial tools guiding the consultant to measure and understand complex problems within organizations. Prerequisites: BUS 692; admission to Graduate Studies.

BUS 694 Management Consulting: Implementation 2(2-0)
Development of a framework for the assessment of the effectiveness of the change mechanism. Prerequisites: BUS 693; admission to Graduate Studies.

BUS 697 Special Topics in Business 1-12(Spec)
Special topics of 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 or hybrid format. Prerequisites: Admission to MBA program, permission of the MBA director, and graduate status.

BUS 698 Integration of Business Processes for Management using SAP Software 4(Spec)
Examination of how business processes interact with mySAP ERP in the SAP modules including the analytical and reporting functions in mySAP ERP. CR/NC only. Prerequisites: An SAP course taken at CMU or permission of the MBA director.
**Department of Business Information Systems (BIS)**  
*College of Business Administration*

Karl Smart, Chairperson  
305 Grawn Hall, (989) 774-3554

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James Melton, Ph.D., Business Communication, Research  
Robert Miller, Ph.D., Information Systems Research  
Karl Smart, Ph.D., Business Communications, Research

**Master of Science (M.S.) in Information Systems**

Emil Boasson, Director of MSIS Program  
322 Grawn Hall; 989-774-3588

Minimum Totals for Graduation: 33 hours

**The Program**

The mission of the Master of Science in Information Systems Program (MSIS) is to prepare students to contribute to the analysis, design, development, and maintenance of information systems, and provide technology leadership with a global perspective.

**Degree Requirements:**

Students are required to complete a minimum of 33 graduate credits, pass a comprehensive examination, and satisfy a research requirement through completion of a thesis (Plan A) or an applied project (Plan B).

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**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

**ADMISSION REQUIREMENT SNAPSHOT**

- GPA: 2.7 (or 3.0 in the last two years of study)  
- International Application Deadline: See below.  
- See Admission Requirement Details Below

Admission is valid only for the semester stated in Letter of Admission or Certificate of Admission.

**Placement Exam**

All entering MSIS students are required to take a placement examination. Results from the exam are used to help design an initial course work curriculum. The exam tests a student’s fundamental knowledge in computer literacy and business processes.

A student who passes the exam may register for courses immediately. A student who does not pass a component(s) of the exam may be required to take one or two foundation course(s) as determined by the director of the MSIS Program. Foundation courses are in addition to the regular courses required for the MSIS degree.

**Admissions Process and Deadlines for Master of Science in Information Systems**

<table>
<thead>
<tr>
<th>Who may apply</th>
<th>Application Due Date*</th>
<th>Decision Notification</th>
<th>Advanced Deposit Due Date**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Admission, classes begin late August:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>U.S. Applicants</td>
<td>June 1*</td>
<td>June 30</td>
<td>July 31**</td>
</tr>
<tr>
<td>International Applicants</td>
<td>March 1*</td>
<td>March 31</td>
<td>April 30**</td>
</tr>
<tr>
<td>Spring Admission, classes begin January:</td>
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<tr>
<td>U.S. Applicants</td>
<td>Sept. 15*</td>
<td>Oct. 15</td>
<td>Nov. 15**</td>
</tr>
<tr>
<td>All Applicants</td>
<td>Aug. 15*</td>
<td>Sept. 15</td>
<td>Oct. 15**</td>
</tr>
</tbody>
</table>

*Completed Applications Only  
**$250 Nonrefundable. Note: With a proof of denied student visa, an international student may request the deposit to be refunded.

The admissions committee reviews completed applications according to the preceding schedule. Therefore, it is prudent to apply early.

**Degree Requirements**

**Required Courses (12 hours)**

- BIS 601 - Information Systems 3(3-0)  
- BIS 628 - Application Development 3(3-0)  
- BIS 630 - Systems Analysis and Design 3(3-0)  
- BIS 638 - Database Management for Business Systems 3(3-0)

**Area of Concentration (9 hours)**

A planned course of study in one of the following areas, to be approved by the graduate advisor:

- Enterprise Systems using SAP Software  
- Business Informatics  
- Accounting Information Systems  
- Information Systems

**Electives (6 hours)**

Graduate-level courses approved by the graduate advisor.

**Other Requirement**

Pass a written comprehensive examination in information systems.

**Research Requirement (6 hours)**

Select one of the following plans:

- **Plan A: Thesis**  
  BIS 798 - Thesis 1-6(Spec)  
  Completion of a thesis includes an oral examination over the thesis.

- **Plan B Requirement**
  Plan B requirement is fulfilled with successful completion of:  
  BIS 625 - Research in Information Systems 3(3-0)  
  BIS 635 - Business Systems Applications 3(3-0)  
  To provide evidence of scholarship, each student will complete a substantial written report in the application of information systems within an organization. The project will typically include significant information systems development activity demonstrating evidence of creative ability.

**Total: 33 credit hours**
Master of Business Administration (MBA)
See the College of Business Administration for information.

Graduate Certificate in Cybersecurity

Minimum Totals for Graduation: 15 hours
This is a standalone certificate in the Department of Business Information Systems in College of Business Administration. At the current time, this certificate is offered through Global Campus only.

Admission Requirements, Retention & Termination Standards
The Graduate Certificate in Cybersecurity is designed for regularly admitted graduate students who meet graduate school admissions requirements who desire to acquire advanced knowledge and skills in cybersecurity.

To be considered for regular admissions, an applicant must have:
1. A bachelor's degree with a cumulative GPA of 2.7 from an accredited institution.
2. Computer network literacy as demonstrated by prerequisite coursework or professional certifications in computer networking or cybersecurity.

See an advisor for more information.

Required Courses (15 hours)
Students will take BIS 510 as the first course, followed by BIS 521, 523, and 525 (which may be taken in any order). The culminating course is BIS 530.

BIS 510 - Network & Systems Security Fundamentals 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

Course Descriptions: BIS
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. This course may be offered in an online or hybrid format. Prerequisite: Graduate student status or 86 hours undergraduate credits completed.

BIS 510 Network & 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 520 Teaching & 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. This course is approved for offering in a distance learning format.

BIS 521 Governance, Risk, & Compliance in Cybersecurity 3(3-0)
Examining 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 510.

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 510.

BIS 525 Managing Security & 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 510.

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 510.

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. This course may be offered in an online or hybrid format. 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. Prerequisites: A course supported by SAP software taken at CMU or permission of BIS Chairperson.

BIS 601 Information Systems 3(3-0)
Introduction to the development and use of Information Systems (IS) in organizations, contemporary IS issues, and the use of software to solve business problems. This course may be offered in an online or hybrid format.

BIS 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete degree requirements.

BIS 625 Research in Information Systems 3(3-0)
Addresses information systems (IS) research concepts and methods, and the application of concepts in planning and conducting IS research studies. This course may be offered in an online or hybrid format.

BIS 627 Web Site Development 3(3-0)
Development of web sites using Hypertext Markup Language (HTML), Cascading Style Sheet (CSS), client-side JavaScript, and XHTML to support business functions. This course may be offered in an online or hybrid format. Prerequisite: Admission to the Master of Science in Information Systems (MSIS) program.

BIS 628 Application Development 3(3-0)
A course involving designing and developing computer applications using a modern programming language. This course may be offered in an online or hybrid format.

BIS 630 Systems Analysis and Design 3(3-0)
Introduction to the systems approach to the analysis, design and development of information systems. Methods, tools and technologies are used to develop information systems prototypes. This course may be offered in an online or hybrid format.

BIS 632 Business Network Systems Management 3(3-0)
Examination of the management of telecommunication issues in business applications, especially those related to business network systems. Prerequisites: Admission to the MBA program or MSIS program or permission of the MBA director or MSIS director and completion of the following courses: BIS 221 or BIS 255, ACC 201 and ACC 202 or ACC 250 and ACC 255, MTH 132 or MTH 217 and STA 282, with a minimum grade-point of 2.7 with no course grade lower than a C.

BIS 633 Business Intelligence/Analytics 3(3-0)
A seminar on the information systems and tools used to aid intelligent decision making in contemporary business environment. This course may be offered in an online or hybrid format. Prerequisite: BIS 601.

BIS 634 Seminar in Information Systems Issues 3(3-0)
Overview of contemporary information systems issues. This course may be offered in an online or hybrid format.

BIS 635 Business Systems Applications 3(3-0)
A capstone, project-oriented study of the planning, analysis, design, implementation, and testing of a business system application using modeling tools and available technology platforms. This course may be offered in an online or hybrid format. Prerequisites: BIS 630.

BIS 638 Database Management for Business Systems 3(3-0)
A broad overview of the development and use of database systems in business. The management of databases and their strategic implications will also be covered. This course may be offered in an online or hybrid format. Prerequisite: BIS 601.

BIS 647 Enterprise Systems for Management Using SAP Software 3(3-0)
Examination of the application and management of enterprise software using SAP. Issues include software deployment that supports transaction processing in the business supply chain. This course may be offered in an online or hybrid format.

BIS 656 Business Intelligence Using SAP BW 3(3-0)
A study of SAP Business Intelligence Warehouse (BW). Enterprise data warehousing and advanced reporting and data analysis tools are covered. This course may be offered in an online or hybrid format. Prerequisite: BIS 601.

BIS 657 ABAP Programming for ES 3(3-0)
Application of ABAP programming language to implement business processes using the SAP system as an example of contemporary enterprise software. This course may be offered in an online or hybrid format. Prerequisites: BIS 628 and BIS 647.

BIS 658 Enterprise System Configuration Using SAP Software 3(3-0)
Configuration issues, concepts, and application of enterprise software (SAP) for global business organization integration. This course may be offered in an online or hybrid format. Prerequisites: BIS 630, 647.
Programs of Study

As detailed below, the Department of Chemistry and Biochemistry offers programs of study leading to the master of science (M.S.) degree and the master of arts (M.A.) degree with emphasis in teaching high school chemistry and college chemistry. The M.S. is a research degree and specializations are possible in biochemistry, and in analytical, inorganic, organic, materials, physical and polymer chemistry.

A minimum of 30 semester hours must be satisfactorily completed for either master's degree. A maximum of 15 hours of satisfactory graduate credit may be transferred into the CMU programs. Regular students are expected to be in residence for a period of two years.

Research may be started at any time and may be carried out in the Central Michigan University laboratories, at the Michigan Molecular Institute's complex in Midland or, by special arrangement, at nearby industrial locations.

Many CMU chemistry graduates enter employment in the Tri-Cities industrial complex which includes the Dow Chemical and Dow Corning companies. Graduates may choose to enter the Ph.D. program in the Science of Advanced Materials at CMU or Ph.D. programs of other institutions.
Research Facilities
The department occupies approximately 62,000 square feet in the Dow Science Complex, which contains research stations for more than 20 full-time graduate students.

Instrumentation includes specialized equipment used in specific research projects, GC/MS, thermal analysis systems, Raman, GPC and HPLC chromatographic systems, as well as UV, AA, FT-IR, AFM, and superconducting NMR instruments.

A small collection of bound research journals is kept within the department, and a complete research library is located in nearby Park Library.

Financial Aid
Financial support for chemistry graduate students is available in several forms. Graduate teaching assistantships, the most common form of support, involve full-time graduate study and require teaching activities. Graduate teaching assistants receive a cash stipend (adjusted annually) and remission of 20 credits of tuition. Full-time students with outstanding records may receive graduate research fellowships. A reduced amount of teaching is required of fellows. Individual faculty research grants support fellowship or summer research activities as well. Generally all full-time graduate students receive aid in one of the categories described above.

Master of Science (M.S.) in Chemistry
Minimum Totals for Graduation: 30 hours

<table>
<thead>
<tr>
<th>Admission Requirements, Retention &amp; Termination Standards</th>
</tr>
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<tbody>
<tr>
<td>Admission Requirement Snapshot</td>
</tr>
<tr>
<td>GPA: 2.7 (and 2.7 in Chemistry)</td>
</tr>
<tr>
<td>Entrance Exam: GRE – General</td>
</tr>
<tr>
<td>Internat’l Application Deadline: July 1 (Fall), Oct.1 (Spring)</td>
</tr>
<tr>
<td>See Admission Requirement Details Below</td>
</tr>
</tbody>
</table>

Applicants for admission to the Chemistry M.S. program must be admitted initially to Graduate Studies. In addition to the Office of Research and Graduate Studies admission materials, the applicant must provide the GRE general exam scores and two to three letters of reference. Students from non-English speaking countries may be required to submit TOEFL scores. Upon submission of all required materials, the College forwards the materials to the Department of Chemistry and Biochemistry for admission recommendation. Final notice of admission comes from the Office of Research and Graduate Studies. Applicants should submit all required materials at least six weeks before the beginning of the semester.

Applicants should have received a baccalaureate degree in chemistry, biochemistry, or related area, with a minimum grade point average of 2.7 overall and 2.7 in chemistry courses. Undergraduate coursework should include mathematics through calculus and one year of physics. Students with deficiencies in chemistry, mathematics, or physics may receive conditional admission. Regular admission is granted when those deficiencies are removed by completing coursework in addition to that required for the M.S. degree.

Financial support in the form of teaching and research assistantships is available. In order to receive full consideration for all scholarships and assistantships, completed applications and all transcripts, scores, and letters should be received by February 1 for fall semester admission and by October 1 for spring semester admission.

Full-time students are required to attend and actively participate in all department seminars.

Satisfactory progress through the M.S. program involves maintaining a 3.0 cumulative grade point average in graduate courses, completion of a faculty directed program of research, and successful preparation and defense of a written thesis.

Foundation Courses (9-10 hours)
Select three from the following:
CHM 511 - Advanced Analytical Chemistry 4(2-4)
CHM 521 - Fundamentals of Biochemistry 3(3-0)
CHM 531 - Advanced Inorganic Chemistry 3(3-0)
CHM 541 - Intermediate Organic Chemistry 3(3-0)
CHM 555 - Advanced Physical Chemistry 3(3-0)

Note: Students are expected to show competency in all foundation areas at the undergraduate level. The Graduate Program Committee will determine any required foundation courses based on transcripts and placement exam performance (Chemistry department or American Chemical Society exams taken the week before the student’s initial semester).

Required Courses (3 hours)
CHM 601 - Chemistry Seminar Presentations 2(2-0)
CHM 602 - Scientific Writing in Chemistry 1(1-0)

Electives (11-12 hours)
At least 6 credit hours must be earned in Chemistry courses at the 600 level. Electives must be approved by the Graduate Program Committee.

Thesis (6 hours)
CHM 798 - Thesis 1-6(Spec)

Note: Arrangements for completion of the thesis requirements are worked out between the student, research director and thesis committee chair. For further information, the student may confer with the graduate program coordinator or the Department of Chemistry and Biochemistry.

Total: 30 semester hours

Master of Arts (M.A.) in Teaching Chemistry:
Teaching College Chemistry
Minimum Totals for Graduation: 30 hours

<table>
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<tr>
<th>Admission Requirements, Retention &amp; Termination Standards</th>
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<tr>
<td>Admission Requirement Snapshot</td>
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</tr>
<tr>
<td>See Admission Requirement Details Below</td>
</tr>
</tbody>
</table>

Applicants for admission to the M.A. in Teaching College Chemistry program must be admitted initially to Graduate Studies. In addition to the Office of Research and Graduate Studies admission materials, the applicant must provide the GRE general exam scores and 2 - 3 letters of reference. Students from non-English speaking countries may be required to submit TOEFL scores. Upon submission of all required materials, the College forwards the materials to the Department of Chemistry and Biochemistry for admission recommendation. Final notice of admission comes from the Office of Research and Graduate Studies. Applicants should submit all required materials at least six weeks before the beginning of the semester.

Applicants should have received a baccalaureate degree in chemistry, biochemistry, or related area, with a minimum grade point average of 2.7 overall and 2.7 in chemistry courses. Undergraduate coursework should include mathematics through calculus and one year of physics. Students with deficiencies in chemistry, mathematics, or physics may receive conditional admission. Regular admission is granted when those deficiencies are removed by completing coursework in addition to that required for the M.A. degree.

Financial support in the form of teaching and research assistantships is available. In order to receive full consideration for all scholarships and assistantships, completed applications and all transcripts, scores, and letters should be received by February 1 for fall semester admission and by October 1 for spring semester admission.

Full-time students are required to attend and actively participate in all department seminars.

Foundation Courses (9-10 hours)
Select three from the following:
CHM 511 - Advanced Analytical Chemistry 4(2-4)
CHM 521 - Fundamentals of Biochemistry 3(3-0)
CHM 531 - Advanced Inorganic Chemistry 3(3-0)
CHM 541 - Intermediate Organic Chemistry 3(3-0)
CHM 555 - Advanced Physical Chemistry 3(3-0)

Note: Students are expected to show competency in all foundation areas at the undergraduate level. The Graduate Program Committee will determine any required foundation courses based on transcripts and placement exam performance (Chemistry department or American Chemical Society exams taken the week before the student’s initial semester).

Required Courses (3 hours)
CHM 601 - Chemistry Seminar Presentations 2(2-0)
CHM 602 - Scientific Writing in Chemistry 1(1-0)

Electives (11-12 hours)
At least 6 credit hours must be earned in Chemistry courses at the 600 level. Electives must be approved by the Graduate Program Committee.

Thesis (6 hours)
CHM 798 - Thesis 1-6(Spec)

Note: Arrangements for completion of the thesis requirements are worked out between the student, research director and thesis committee chair. For further information, the student may confer with the graduate program coordinator or the Department of Chemistry and Biochemistry.

Total: 30 semester hours
Satisfactory progress through the M.A. program involves maintaining a minimum 3.0 cumulative grade point average in graduate courses and completion of faculty directed creative scholarship in the teaching of chemistry and a scholarly paper.

Degree Requirements

- A minimum of 30 semester hours of courses taken as a graduate student.
- A minimum of 55 semester hours of chemistry (combining graduate and undergraduate credits).
- A minimum of 15 semester hours of chemistry at or above the 600 level.

CHM 781 - Chemistry Teaching Practicum 2(Spec)
CHM 793 - Chemistry Teaching Internship 1-9(Spec)
CHM 794 - Experimentation in the Teaching of Chemistry 1-6(Spec)

Note: Three to nine hours of CHM 793 are required. Six semester hours of CHM 794 shall be fulfilled by demonstration of creative scholarship in the teaching of chemistry as designated by the committee.

Total: 30 Semester Hours

Ph.D. in the Science of Advanced Materials

This degree is an interdisciplinary program. Please see the index for the page number.

Ph.D. in Earth and Ecosystem Science

This degree is an interdisciplinary program. Please see the index for the page number.

Course Descriptions: CHM

CHM 505 Teaching Chemistry and Physics in Secondary Schools 3(3-0)
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. Pre/Co-requisite: CHM 505. Credit may not be earned in more than one of these courses. Prerequisites: CHM 132 or 161, PHY 131 or 146; admission into the Teacher Education Program; signed major or minor in chemistry, physics or chemistry-physics (secondary education); Junior standing. Graduate students must be enrolled in a teaching masters 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(2-4)
Spectroscopic, electrochemical, and other techniques as applied to analytical chemistry. Prerequisites: CHM 211. Recommended: CHM 352 or 355.

CHM 513 Chemistry of Natural Waters 3(1-6)
Fundamentals of laboratory and field analysis of water and their application to environmental studies. Prerequisites: CHM 211.

CHM 521 Fundamentals of Biochemistry 3(3-0)
Structure, function, and metabolism of proteins, carbohydrates, lipids, and nucleic acids. Prerequisites: CHM 346.

CHM 522 Intermediate Biochemistry 3(3-0)
Continuation of CHM 521. Material covered will include in-depth exploration of metabolism of biomacromolecules and biochemical processes requiring their use. Prerequisites: CHM 521.

CHM 527 Biochemistry Laboratory 10-4
Isolation, characterization, and analysis of proteins, carbohydrates, lipids, vitamins, and nucleic acids using chromatographic, electrophoretic, and spectroscopic techniques. Prerequisite: CHM 211, CHM 349. Pre/Co-Requisite: CHM 425 or CHM 521.

CHM 528 Bioanalytical Techniques Laboratory 2(1-3)
Laboratory analysis of biochemical materials using volumetric, electroanalytical, spectroscopic, and chromatographic techniques. Prerequisites: CHM 425 or 521, Pre/Co-Requisite: CHM 527.

CHM 531 Advanced Inorganic Chemistry 3(3-0)
Molecular structure and symmetry, acid-base and oxidation-reduction chemistry, reactivity of inorganic compounds from a thermodynamic basis, catalysis, solid state and organometallic compounds. Prerequisites: CHM 331. Recommended: CHM 352.

CHM 541 Intermediate Organic Chemistry 3(3-0)
Mechanisms of organic reactions, emphasizing methods by which these are determined, including kinetics, principles of bonding, stereochemistry, and nuclear magnetic resonance in depth. Prerequisites: CHM 346. Recommended: CHM 352 or 355.

CHM 547 Advanced Chemistry Laboratory 2(1-3)
Advanced synthesis, separation, and structure determination of organic and inorganic compounds. Prerequisite: CHM 349, 331.

CHM 551 Materials Chemistry: Inorganics and Nanomaterials 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. Prerequisites: CHM 331 or graduate status. Recommended: CHM 346.

CHM 555 Advanced Physical Chemistry 3(3-0)
Advanced development and application of physical theories using a statistical-mechanical approach to understanding of molecular energetics and kinetics. Prerequisites: CHM 352 or 355; MTH 233.

CHM 561 Polymer Chemistry 3(3-0)
An introductory course on polymer synthesis, polymer theory, and basic characterization techniques. Prerequisites: CHM 346, 352.

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.

CHM 564 Polymer Technology 3(3-0)
A consideration of the major groups of technologically important polymers, including raw material base, the important methods of manufacture, properties, processing, compounding, uses and testing. Prerequisite: CHM 561.

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. Prerequisite: CHM 346 or graduate standing. Recommended: CHM 352 or 355, CHM 425 or 521, CHM 561, BIO 110.

CHM 567 Polymer Science Laboratory 2(1-3)
Exploration 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. Corequisite: CHM 561.

CHM 568 Pharmaceutical Chemistry 3(3-0)
Interdisciplinary introduction to the science of drug formulation, delivery and efficacy. Prerequisites: CHM 346 or 342 or graduate standing. Recommended: CHM 425 or 521, CHM 355, BIO 392.

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.

CHM 601 Chemistry Seminar Presentations 2(2-0)
Exploration of methods and skills involved in scientific technical presentation of chemistry and chemically-related technical materials. Prerequisites: Admission to a graduate program in Chemistry.

CHM 602 Scientific Writing in Chemistry 1(1-0)
Exploration of methods and skills involved in the writing of refereed scientific papers, grant proposals, theses and dissertations. Prerequisites: Admission to a graduate program in Chemistry.

CHM 611 Advanced Topics in Analytical Chemistry 1-9(Spec)
Special topics in analytical chemistry not included in the regular courses in the chemistry graduate program. Course may be taken for credit more than once; total credit not to exceed nine hours. Prerequisites: CHM 511.

CHM 612 Techniques in Nuclear Magnetic Resonance Spectroscopy 3(2-3)
Theory and implementation of multiple-pulse and multidimensional techniques in NMR spectroscopy. Designed to support graduate coursework and research in Chemistry and Materials Science. Prerequisites: Admission to a graduate degree program in chemistry or related field.
CHM 619  Continuing Registration for Final Research Project 1(1-0)  
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements. Prerequisites: Permission of chemistry graduate advisor or department chairperson.

CHM 621  Advanced Biochemistry 3(3-0)  
Advanced study of enzymatic mechanisms that regulate biological processes including cell division, signaling, and immunity. Prerequisites: CHM 521.

CHM 624  Advanced Topics in Biochemistry 1-9(Spec)  
Special topics in biochemistry not included in the regular courses in the chemistry graduate program. Course may be taken for credit more than once; total credit not to exceed nine hours. Prerequisites: CHM 522.

CHM 631  Coordination Chemistry 3(3-0)  
This course will describe the structure, bonding, reactivity, and characterization of coordination compounds, with a discussion of solid-state characterization techniques and applications. Prerequisite: CHM 531.

CHM 632  Advanced Topics in Inorganic Chemistry 1-9(Spec)  
Special topics in inorganic chemistry not included in the regular courses in the chemistry graduate program. Course may be taken for credit more than once; total credit not to exceed nine hours. Prerequisites: CHM 531.

CHM 641  Advanced Topics in Organic Chemistry 1-9(Spec)  
A variety of specialized topics presented by experts. May be repeated as offered to a maximum of 9 hours. Prerequisite: CHM 643.

CHM 643  Physical Organic Chemistry 3(3-0)  
Mechanisms of diverse organic reactions based on reactivity of compounds, emphasizing the study of mechanisms including kinetics, free energy relationships, bonding, and stereochemistry. Prerequisites: CHM 541.

CHM 644  Organic Reactions and Synthesis 3(3-0)  
A general survey of advanced organic reactions and syntheses; examples from the research literature are emphasized. Prerequisites: CHM 541.

CHM 651  Advanced Topics in Physical Chemistry 1-9(Spec)  
A variety of specialized topics presented by experts. May be repeated as offered to a maximum of 9 hours. Prerequisite: CHM 352.

CHM 655  Quantum and Computational Chemistry 3(3-0)  
Application of physical theories using a quantum mechanical approach and computational techniques for understanding of properties of atoms, molecules, and molecular systems. Prerequisites: CHM 352, MTH 233.

CHM 663  Polymer Synthesis 3(3-0)  
Directed research supervised by a chemistry faculty member. May be repeated for a total of 6 credits. Prerequisites: Permission of Chemistry department chair. CR/NC only.

CHM 665  Advanced Topics in Polymer Chemistry 1-9(Spec)  
A description of polymer additivites including structure, function, and effectiveness with different polymer systems; examples from the research literature are emphasized. Prerequisite: CHM 561 or SAM 710.

CHM 669  Polymer Processing 3(3-0)  
A description of polymer systems, including solution properties, rheology, degradation, and processing; examples from the research literature are emphasized. Prerequisites: CHM 561 or SAM 710.

CHM 781  Chemistry Teaching Practicum 2(Spec)  
The design and delivery of instructional materials, presentations, and laboratory experiments. Emphasis placed on improving student subject matter capabilities in chemistry. CR/NC only. Prerequisites: Admission to the Master of Arts in Teaching Chemistry Program; permission of the instructor.

CHM 791  Directed Research 1-6(Spec)  
A written thesis and an oral departmental seminar on the thesis research. Prerequisites: Admission to a graduate program in chemistry; permission of the chemistry department chairperson. CR/NC only.
approved graduate-level courses appropriate to a student’s degree program from an accredited college or university may be transferred. Students must receive approval from the Director of Graduate Studies or their academic advisor and apply to the Office of Research and Graduate Studies for permission to transfer credit.

English Language Competency Requirements for International Students

The Department of Communication and Dramatic Arts has introduced guidelines for the English language competency requirements of international graduate students seeking admission to the department's graduate program. The guidelines are as follows:

1. International students who have a score of 600 PBT1 (250 CBT2, 100 iBT3) or better on the International TOEFL are eligible for regular admission to the graduate program in the Department of Communication and Dramatic Arts if all other requirements are met.

2. International students who have a score of between 575 PBT (232 CBT, 90 iBT) and 599 PBT (249 CBT, 99 iBT) on the International TOEFL, a score of 80 points or higher on CMU’s ELI Written English Competency Test, and a score of 25 or higher on CMU’s ELI Oral English Language Competency Test are eligible for regular admission to the graduate program in the Department of Communication and Dramatic Arts if all other requirements are met.

3. International students who have a score between 575 (232 CBT, 90 iBT) and 599 (248 CBT, 99 iBT) on the International TOEFL, but have a score of 79 points or less on CMU’s ELI Written English Competency Test, and/or a score of 24 or less on CMU’s ELI Oral English Language Competency Test are eligible for conditional admission to the graduate program in the Department of Communication and Dramatic Arts if all other requirements are met. Such students must complete by the end of their first semester of graduate work, a course of English language study as outlined by the ELI in conjunction with the Department of Communication and Dramatic Arts.

4. International students with a score of less than 574 (230 CBT, 89 iBT) on the International TOEFL will be denied admission to the graduate program of the Department of Communication and Dramatic Arts.

1 PBT = Paper-Based Test
2 CBT = Computer-Based Test
3 iBT = internet-Based Test

Core Courses (6 hours)

COM 600 - Introduction to Research and Graduate Study in Communication 3(3-0)

COM 601 - Research Design in Communication 3(3-0)

Required Courses I (3 hours)

Select one of the following:

COM 602 - Qualitative Research Methods 3(3-0)
COM 750 - Seminar in Rhetorical Criticism 3(3-0)

Required Courses II (12 hours)

COM 603 - Professional Seminar in Communication 1-3(Spec)
COM 661 - Contemporary Communication Theory 3(3-0)
COM 664 - Seminar in Organizational Communication 3(3-0)
COM 668 - Seminar in Interpersonal Communication 3(3-0)

Additional Requirement (0-6 hours)

Student must complete either a comprehensive examination or a 6-credit hour thesis (research or applied).

COM 798 - Thesis 1-6(Spec)

Electives (6-12 hours)

Courses in Communication selected in consultation with advisor. No more than 3 credits from COM 764 or COM 790.

Total: 33 semester hours

Financial Aid

The department offers the following kinds of financial aid: teaching assistantships and forensics assistantships. Graduate teaching assistants teach two classes of COM 101 per semester, graduate forensics assistants work and travel with either the debate team or individual events participants and may teach one COM 101 class. Graduate administrative assistantships may also be available. All assistantships begin in the fall semester. Assistant in good standing are eligible for a minimum of two semesters of financial support and a 20-credit tuition scholarship. Graduate assistantships may be renewed for an additional two semesters. Application deadline: March 15.

Course Descriptions: COM

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. Prerequisites: COM 251, 301 with grades of C or better; COM 361.

COM 527 Political Communication 3(3-0)

This course considers the influence of political communication in American society. The course addresses the connections between political discourse, the American people, and the media. Prerequisites: COM 251, 301 with a grade of C or better; junior 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: grades of C (2.0) or better in COM 251, 301.

COM 558 Historical Backgrounds of Communication Theory 3(3-0)

Theories of rhetoric and communication from the classical, medieval, and Renaissance periods studied in a comprehensive historical philosophical survey. Prerequisite: COM 251, 301 with grades of C or better.

COM 560 Communication and Social/Organizational Change 3(3-0)

Research and methods of communicating changes into existing social systems. This course may be offered in an online or hybrid format. Prerequisite: COM 251, 301, with grades of C or better; or IPR major with junior standing; or graduate standing.

COM 561 Communication in Conflict Management 3(3-0)

The study of verbal and nonverbal communication processes, patterns, and problems in the family. The uniqueness of the family system as a communication context is emphasized. Prerequisites: COM 251, 301 with grades of C or better.

COM 563 Health Communication Campaigns 3(3-0)

Research and methods of communicating health messages for education and disease prevention. This course may be offered in an online or hybrid format. Prerequisites: COM 251, 301 each with a grade of C or better; or IPR major with junior standing; or graduate standing.

COM 565 Communication Training in Organizations 3(3-0)

This course examines the role of training in improving communication in organizations. This course discusses the design, development, implementation, and evaluation of organizational communication training. Prerequisites: COM 251, 301 with grades of C or better; COM 264.

COM 569 Communication in the Classroom 3(3-0)

Integrates research from several fields describing communication patterns between students and teacher-to-student within school settings. Designed for students interested in teaching or administration. Prerequisite: completion of 56 hours of undergraduate credit.

COM 591 Oral Communication with Children 3(3-0)

Study and practice of adult/child communication patterns. Course will include State objectives for speaking/listening. Designed for teachers and people working with children.

COM 594 Directing Speech Activities 3(3-0)

Designed to provide the student or the professional teacher with the skills needed to coach and administer forensics activities on the high school level. Prerequisites: COM 251, 301 with grades of C or better.

COM 600 Introduction to Research and Graduate Study in Communication 3(3-0)

Introduces students to the history of the communication discipline, primary and secondary research methods, and scholarly writing relevant to communication arts and sciences.

COM 601 Research Design in Communication 3(3-0)

Prepares the student to understand the assumptions and rationale of social scientific research, and to understand and perform laboratory and field experiments.
COM 602 Qualitative Research Methods 3(3-0)
Exploration of theoretical and methodological issues in qualitative research in communication, focusing on particular research strategies including participant observation, ethnography, in-depth interviewing, and narrative. Prerequisites: COM 600.

COM 603 Professional Seminar in Communication 1-3(Spec)
This course explores topics such as: managing graduate workload, presenting/publishing professionally, conducting ethical research, choosing either comprehensive exam or thesis options, development of a prospectus. CR/NC Only. Prerequisites: Admission into the Master of Arts in Communication program.

COM 619 Continuing Registration for Final Research Project 1-10
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

COM 660 Special Topics: Graduate Seminar 3-9(Spec)
This course will examine current research and theory in communication at the graduate level. Three hours each; maximum: nine credit hours.

COM 661 Contemporary Communication Theory 3(3-0)
Critical interpretation and evaluation of published social psychological research which serves as the theoretical foundation of communication.

COM 662 Seminar in Persuasion 3(3-0)
Examines and analyzes theories and principles concerned with persuasion and attitude change. Emphasis placed on theory development, application, and evaluation. Prerequisites: COM 385.

COM 664 Seminar in Organizational Communication 3(3-0)
Includes a rigorous examination of the principles governing organizational communication and how these principles may be applied in practice and research. Prerequisites: COM 600.

COM 665 Seminar in Communication and Negotiation in Employee Relations 3(3-0)
The course examines the role of communication and negotiation in the employee relations process within a work organization. This course may be offered in an online or hybrid format.

COM 677 Seminar in Intercultural Communication 3(3-0)
This course examines the theory, practice, and research related to the process of communication between people from different cultural backgrounds. This course is approved for offering in a distance learning format. Prerequisites: COM 600.

COM 688 Seminar in Interpersonal Communication 3(3-0)
Seminar focuses on interpersonal communication theories and research. Students critically evaluate current theories and examine popular research methods. Prerequisite: Admission to the Master of Arts in Communication.

COM 750 Seminar in Rhetorical Criticism 3(3-0)
Conceptual approaches to the criticism of oral communication. Criteria for criticism, description, analysis, and critical evaluation of speeches and other forms of interpersonal communication.

COM 764 Communication Internship 1-6(Spec)
Designed to apply knowledge of speech, theory, and skills in speech communication within a supervised organizational context. Prerequisite: Prior written approval of internship coordinator.

COM 790 Advanced Independent Study 1-4(Spec)
Intensive study of some special problem under guidance of a faculty member or faculty committee. Prerequisites: permission of advisor and instructor.

COM 795 Seminar, Teaching College Communication 3(2-2)
Workshop/seminar in philosophies, strategies, and practices of teaching basic speech courses, directing communication programs, and applying theory at the college level. Prerequisites: 15 hours in speech communication and dramatic arts.

COM 798 Thesis 1-6(Spec)
The thesis option for Graduate Students in Communication. CR/NC only.

Course Descriptions: TAI

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 interpretive reading, its current theories and possible trends. Prerequisite: one course in interpretive reading.

TAI 574 History of Drama and Theatre I 3(3-0)
Development of drama and theatre in Western culture from ancient origins to 1700. Prerequisites: 6 hours of TAI coursework.

TAI 575 History of Drama and Theatre II 3(3-0)
Continuation of TAI 574, History of Drama and Theatre I. Development of drama and theatre in Western culture from 1700 to 1945. Prerequisites: 6 hours of TAI coursework.

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 CDA 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 586 Playwriting 3(3-0)
Theory and practice in writing original plays; discussion and critical evaluation of student plays. 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. Prerequisite: 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.

TAI 602 Modern Performance Theory 3(3-0)
Intensive examination of the growth and development of major assumptions underlying modern approaches to theatrical production. TAI 619 Continuing Registration for Final Research Project 1-10
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

TAI 790 Advanced Independent Study 1-4(Spec)
Intensive study of some special problem under guidance of a faculty member or faculty committee. Prerequisite: permission of advisor and instructor (and completion of form).

Course Descriptions: DAN

DAN 530 History of Dance 3(3-0)
Dance history from its primitive beginning to the present. Relationships of dance forms to the societies in which they developed.

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.
Department of Communication Disorders (CDO, ASL)
The Herbert H. and Grace A. Dow College of Health Professions

(Audiology, Speech Language Pathology)
Mark Lehman, Chairperson
989-774-1323, 2186 Health Professions

Kathryn Atkinson, Clinical Supervisor, CCC-SLP; M.A., Central Michigan University. Adult traumatic brain injury, adult dysphagia, adult neurogenic group therapy, multidisciplinary therapeutic processes
Laurie Bahlke, Clinical Supervisor, Speech-Language Pathology; CCC-SLP; M.A., Central Michigan University. Dysphagia, traumatic brain injury, adult neurogenic, child speech and language
Jill Bollman, Clinical Supervisor, Audiology; CCC-A; M.S., Rush University; Au.D., A.T. Still University. Child diagnostics and amplification, educational audiology and teaching
Natalie Douglas, Assistant Professor, CCC-SLP; M.A., Ohio University; Ph.D., University of South Florida. Adult cognitive-communicative disorders, aphasia, implementation science
Nicole M. Ferguson, Director of Clinical Services & Instruction in Audiology; CCC-A, FAAA; Au.D., Central Michigan University. Pediatric & Adult Diagnostics, Electrophysiology, Vestibular Assessment, Amplification, Tinnitus, Teleaudiology, and Veteran Hearing & Balance Health

Mark Lehman, Professor and Department Chairperson; CCC-SLP; M.A. and Ph.D., University of Michigan. Speech science, anatomy and physiology, dysarthria, voice in adults.
Stacey Lim, Assistant Professor, CCC-A, Au.D., University of Akron; Ph.D., Kent State University. Cochlear implants, aural rehabilitation, language and literacy development of children with hearing loss, educational audiology
Jennifer Thompson Mackovjak, Clinical Supervisor; CCC-SLP CBIS; M.A. Central Michigan University. Brain injury, Vital Stim treatment, autism
Susan Naeye-Velguth, Professor and Director of American Sign Language Division; CCC-A; M.S. and Ph.D., University of Minnesota. Rehabilitative audiology, American Sign Language, speech and language development of children with hearing loss.
M. Dawn Nelson, Associate Professor; FAAA; CCC-A; M.S., University of Maryland; Ph.D., Vanderbilt University. Auditory electrophysiology, central auditory processing, vestibular assessment and rehabilitation, neuroanatomy
Shannon Palmer, Assistant Professor; CCC-A; Au.D. and Ph.D., University of Connecticut; Diagnostic audiology, electrophysiology, central auditory processing disorders, cochlear implants
Claudia Pastorelli, Clinical Supervisor, CCC-A; M.A., University of Maryland; Au.D., University of Florida. Adult and pediatric diagnostics, vestibular testing, hearing aids
Lori Pietrandrea-Bissell, Fixed Term Faculty; CCC-SLP, M.A., Central Michigan University. Language development, anatomy and physiology.
Ann Ratcliff, Professor; CCC-SLP; M.S., University of Redlands; Ph.D., University of Wisconsin. Child language development and disorders, craniofacial anomalies including cleft palate, augmentative and alternative communication
Stephanie Richards, Assistant Professor, CCC-SLP; M.A., Central Michigan University; Ph.D., Bowling Green State University. Adolescent and adult language and literacy

Katie Squires, Assistant Professor, CCC-SLP; M.S., Nova Southeastern University; Ph.D., Utah State University. Child Language and Literacy
Michael Stewart, Professor and Director of Audiology Division; CCC-A, FAAA; M.A., Western Michigan University; Ph.D., Michigan State University. Hearing aids, hearing conservation, clinical supervision, private practice
Janet Sturm, Professor; CCC-SLP; Ph.D., University of Nebraska - Lincoln. Child language disorders, augmentative and alternative communication, literacy
Bradford L. Swartz, Associate Professor; CCC-SLP; M.A., Central Michigan University; Ph.D., Michigan State University. Speech and hearing science, phonetics, dysphagia, voice
Suzanne Woods, Associate Professor and Director of Speech-Language Pathology Division; CCC-SLP; M.A. in Speech-Language Pathology and Educational Administration, Central Michigan University; Ph.D., Michigan State University. Clinical supervision, fluency, programs for special populations, neurogenics, phonology, school age settings

Yunfang Zheng, Assistant Professor; CCC-A; M.D., Suzhou Medical College, Sc.D., Montclair State University. Audiology diagnostics (pediatric and adult), amplification, aural rehabilitation, cochlear implants

The Programs
The Department of Communication Disorders offers the Doctor of Audiology degree for audiologists and Master of Arts degree in Speech-Language Pathology for speech-language pathologists, which lead to eligibility to apply for clinical certification and licensure and are accredited by the American Speech-Language-Hearing Association's (ASHA) Council on Academic Accreditation.

The high quality research facilities of the department are exemplary and extensive. Students are encouraged to participate in research and grant writing. A range of state-of-the-art instruments and software is available for specialized audiometric, acoustic and speech-language analyses.

Students and faculty study a wide range of speech, language, and hearing problems. The Carls Center clinical population furnishes appropriate opportunities to carry out research projects. Many off-campus clinical facilities welcome student training and research activity. The clinic offers experiences in both individual and group treatment. There are opportunities available for pre-school placements within the speech-language clinic as well as clinical experience with those in need of augmentative and alternative communication services and endoscopic visualization of the larynx for voice/swallow assessment. In addition, a number of students are afforded the opportunity to travel to local schools to work with school-aged children in programs which involve traditional speech and language therapy as well as phonemic awareness programs. Experiences with adult populations involve innovative therapy for all types of speech and language disorders, including those secondary to traumatic brain injury (TBI), aphasia and voice, stuttering, among others. The Summer Speech-Language Specialty Clinics include a specialized five-week treatment program for children and adolescents with all types of communication disorders.

A number of graduate students are awarded competitive assistantships, which may be renewed for students whose academic achievement and clinical skills warrant continued support. Stipend amounts vary, depending upon the funding source. Appointment to an assistantship qualifies graduate students for in-state tuition rates.

In order for prospective students to receive full consideration for admission and financial assistance, applications and all accompanying documents must be received by January 15 for both degree programs for entrance in the fall semester. There are no spring semester admissions. (Early applications are encouraged.) Both graduate programs participate with the Communication Sciences and Disorders Centralized Application System (CSDCAS) on-line application process. This can be accessed at http://csdcas.org. Admission to both graduate programs is a competitive process. Neither successful completion of an undergraduate degree at CMU or another university, nor meeting the minimal entrance requirements of CDO or the Office of Research and Graduate Studies guarantees admission. The number of students admitted each fall is governed by the number of available openings in the program.
Scholarships
CDO-SLP Alumni Scholarship
Established in 1998 through alumni support, for a second-year graduate student in the Speech-Language Pathology Program in the Department of Communication Disorders.

J. Dean and Betty L. Eckerly Audiology Scholarship
Established in 1996 as a renewable scholarship for a graduate status audiology student within the Department of Communication Disorders who earned a minimum GPA of 3.5 as 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. Eckerly Scholarship.

Nicholas P. Redfield Scholarship
Established in 1998 by colleagues in memory of Dr. Redfield for a third-year Au.D. doctoral student who demonstrates a "client-centered" approach in clinical performance. Volunteer work and efforts to better the audiology program at CMU will also be considered in selecting a candidate for this award.

Master of Arts (M.A.) in Speech-Language Pathology

Editor's Note: The degree published in the paper 15-16 Bulletin has the incorrect amount of total hours. This is the version to be followed on the 15-16 Bulletin. The degree in the 15-16 paper Bulletin, for 62 hours, will be implemented in the 16-17 year.

Minimum Total for Graduation: 54 hours

Admissions Requirements, Retention & Termination Standards

<table>
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<tr>
<th>Admission Requirement Snapshot</th>
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<tbody>
<tr>
<td>Entrance Exam: GRE</td>
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<tr>
<td>GPA: 3.25 (see admission standards)</td>
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<tr>
<td>Application Deadline: January 15 (Summer II)</td>
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<tr>
<td>International Students from not from English Proficiency Exempted Countries: TOEFL required – minimum score of 100 IBT, 250 CBT, 600 PBT (some exceptions may apply)</td>
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Retention Standards
All students pursuing the Master of Arts in Speech-Language Pathology degree must comply with the American Speech-Language-Hearing Association national certification requirements and maintain a 3.0 GPA. All students concentrating in speech-language pathology must complete a minimum of 400 hours of direct supervised clinical experience under the supervision of an ASHA certified (and state licensed, if applicable) supervisor during their undergraduate and graduate programs. Of these, a minimum of 325 hours must be completed at the graduate level. On-campus classes will begin during summer II of the year admitted. During the first summer of matriculation, graduate students will be enrolled in two classes and an online orientation. No clinical assignments will be made during the first summer of matriculation. Following the first summer enrollment, each full-time graduate student will be expected to enroll in clinical practicum each semester in addition to classes. Various clinical duties will be assigned in consultation with the Director of Clinical Instruction and Speech-Language Pathology Services. In addition, graduate students will be expected to participate in the Summer Speech-Language Pathology Specialty Clinics as a student clinician during the summer following their first year in the graduate program. Additional courses may be required, depending on the student's academic background. The final determination of course requirements is made in consultation with the student's academic guidance committee.

The Speech-Language Pathology program at Central Michigan University is designed to prepare graduates for clinical careers as Speech-Language Pathologists. The Essential Functions and Technical Standards for Speech-Language Pathology establish essential qualities (Continued)
semesters for three (3) credits. Participation in the Summer Speech-Language Specialty Clinics is required during the summer following the first year in the graduate program.

• Practicum coursework includes obtaining clock hours with clients. These clock hours are based upon student need as determined by the academic guidance committee and the Director of Clinical Services.

Additional Requirement
Select one of the following capstone experiences:

Plan A
Required Course (6 hours)
CDO 798 - Thesis 1-6(Spec)

Plan B
Required Course (6 hours)
CDO 795 - Internship 3-6(Spec)

Plan B: Option 2
Required Course (3 hours)
CDO 790 - Advanced Independent Study 1-9(Spec)

Electives (0-8 hours)
Select from the following courses in consultation with student's academic advisor and approval of student's academic advising committee to bring total program credits to a minimum of fifty-four (54):
- CDO 537 - Special Topics in Communication Disorders 1-9(Spec)
- CDO 550 - Communication Assessment and Intervention in Children with Autism 3(3-0)
- CDO 551 - Autism Spectrum Disorders: A Clinical Focus 3(3-0)
- CDO 632 - Counseling Issues in Communication Disorders 3(3-0)
- CDO 637 - Special Topics in Communication Disorders 3(Spec)
- CDO 639 - Hypopharyngeal Visualization 2(1-2)
- CDO 640 - Cadaveric Anatomy for Communication 3(2-2)
- CDO 702 - Infant-Toddler Communication: Assessment and Intervention 2(2-0)
- CDO 705 - Cognitive-Communicative Disorders of Traumatic Brain Injury 3(3-0)
- CDO 711 - Craniofacial Disorders 2(2-0)
- CDO 740 - Neuroanatomy 3(3-0)
- CDO 790 - Advanced Independent Study 1-9(Spec)

Total: 54 semester hours

Doctor of Audiology (Au.D.)
Minimum Totals for Graduation: 115 hours

Audiology, Post Baccalaureate
Doctors of Audiology are highly skilled in the wide array of diagnostic, remedial and related areas associated with hearing-impaired persons and their families. Although the Au.D. is not a research-oriented degree, students will acquire the knowledge and skills requisite to evaluate/interpret the existing literature, and will be required to synthesize and apply pertinent research knowledge to clinical practice and personal research activities. The first two years of study are devoted primarily to the mastery of the audiological knowledge base. Clinical experience evolves in scope and complexity, with the final two years heavily weighted toward clinical training in a variety of settings with practicing audiologists.

Admission
The deadline for receipt of all application materials is January 15 for the professional doctoral (Au.D.) program in Audiology. Admission requirements may be obtained from the Department of Communication Disorders.

The admissions committee will consider the applicant's undergraduate transcript, GRE scores and letters of recommendation. In addition, personal statements and relevant professional experiences will be considered. Applicants from non-English speaking countries must also submit a minimum score of 100 (Internet-based), 250 (Computer-based) or 600 (Paper-based) on the TOEFL. Since an audiologist interacts with patients, an applicant's maturity and interpersonal skills will also be considered. After the initial screening of paper credentials, an interview with each of the most qualified applicants will be used to select the final candidates for admission.

Students normally are accepted into the program on a full-time basis and maintain a course load of approximately 13 credit hours per semester. Exceptions to this are considered on a case by case basis. Each student is assigned a faculty advisor, who will help the student in course selection and monitor his/her progress through the program.

The Audiology program at Central Michigan University is designed to prepare graduates for clinical careers as Audiologists. The Essential Functions and Technical Standards for Audiology establish essential qualities that each individual admitted to the program and graduate of the program must possess. In the event that, during the educational process, a student is unable to fulfill these standards, with or without reasonable accommodation, then the student may be dismissed from the program. Acknowledgment and signatory of the document by the student is required upon admission. It is also reviewed on an annual basis or as appropriately requested by the student, faculty, or clinical supervisor. The document can be accessed at: http://www.cmich.edu/academics/health_professions/Documents/aud_tech_standards.pdf.

Retention Standards
Progress through the program is based upon compliance with university grading standards. In addition, the student must successfully pass comprehensive examinations at the end of his/her third year of the program in order to enroll in CDO 995.

The Au.D. degree will be awarded upon successful completion of course work, clinical practica, comprehensive examination, doctoral project defense, and clinical residency requirements.

Although the curriculum has the flexibility to incorporate the latest advances in the field of audiology, the current curriculum requirements are listed below under Degree Requirements in order of the year they are typically taken.

Students will be placed on probation for:
1. Any grade below a C (2.0) or NC (No credit) in any course required in the Au.D. curriculum.
2. A semester GPA below 3.0 for courses required in the Au.D. curriculum.
3. A cumulative GPA below 3.0 for any semester.

Termination Standards
Students may be dismissed from the program for:
1. Failure to satisfactorily complete any assigned academic or clinical remediation plan.
2. Failure to meet and maintain any of the Au.D. program technical standards.
3. Failure to satisfactorily complete a repeated course at a level of C (or above) or CR (credit) for CR/NC courses the next time the course is offered.
4. Failure (grade of C- or E) of any three courses (academic or on-campus practicum) on the Au.D. curriculum.
5. A failing final grade on the comprehensive examinations. A failing final grade on the comprehensive examinations means that the
student has failed a rewrite and oral examination of one or more of the comprehensive questions. Determination of whether to retain or dismiss the student from the program will be reached by a majority vote of the faculty/staff of Audiology.

6. Failure (NC) of any of the fourth year clinical externship courses.
7. A lack of professional conduct and/or any behavioral patterns that may jeopardize the safety or wellbeing of patients or others.
8. Unethical or illegal activity including, but not limited to academic dishonesty or violations of the AAA and/or ASHA Codes of Ethics.

Degree Requirements

Required Courses I (33 hours)
The following courses should be taken in the first year:

- CDO 643 - Disorders of Hearing 3(3-0)
- CDO 720 - Anatomy and Physiology Underlying Neuro-otology 3(3-0)
- CDO 730 - Experimental Studies in Communication Disorders 3(3-0)
- CDO 731 - Diagnostic Audiology 3(3-0)
- CDO 740 - Neuroanatomy 3(3-0)
- CDO 750 - Advanced Hearing Science 3(3-0)
- CDO 752 - Amplification for the Hearing Impaired 3(3-0)
- CDO 759 - Introduction to Clinical Practicum: Audiology 2-6(Spec)
- CDO 771 - Advanced Auditory Assessment 3(3-0)
- CDO 785 - Auditory Processing Disorders 3(3-0)

Required Courses II (36 hours)
The following courses should be taken in the second year:

- CDO 754 - Pediatric Audiology 3(3-0)
- CDO 757 - Geriatric Audiology 3(3-0)
- CDO 763 - Audiological Rehabilitation Considerations in Education 3(3-0)
- CDO 764 - Audiologic Rehabilitation for Adults 3(3-0)
- CDO 765 - Cochlear Implants and Other Implantable Technologies 3(3-0)
- CDO 769 - Intermediate Clinical Practicum: Audiology 3-9(Spec)
- CDO 773 - Advanced Amplification Fitting Strategies 3(2-2)
- CDO 781 - Electrophysiological Techniques in Audiology 3(2-2)
- CDO 782 - Evaluation and Management of Vestibular Disorders 3(3-0)
- CDO 853 - Psychosocial Aspects of Hearing Loss 3(3-0)

Required Courses III (28 hours)
The following courses should be taken in the third year:

- CDO 744 - Occupational and Environmental Hearing Conservation 3(3-0)
- CDO 783 - Advanced Electrophysiological and Vestibular Techniques in Audiology 3(3-0)
- CDO 849 - Advanced Clinical Practicum: Audiology 4-12(Spec)
- CDO 863 - Professional Issues in the Practice of Audiology 3(3-0)
- CDO 898 - Doctoral Project 1-12(Spec)
- CDO 995 - Clinical Externship 5-23(Spec)

Notes:

- CDO 898: Students must complete CDO 898 for a total of 6 credit hours. The doctoral project will be an evidenced-based endeavor designed to enhance the student's capacity to be a critical consumer of audiologic research and to create an opportunity for the student to engage in an in-depth study of an area of Audiology. Students may enroll for CDO 898 as variable credit in blocks ranging from 1-6 credit hours. Concurrent with enrollment in CDO 898, the student will select a doctoral project advisor who must have graduate faculty status at Central Michigan University. Prior to initiating the doctoral project, it must be approved by the Division of Audiology Doctoral Project Committee. Upon completion of the doctoral project, the student must submit it to the Division of Audiology Doctoral Project Committee in an acceptable format.

- CDO 995: 5 credit hours of CDO 995 in year 3.

Required Courses IV (18 hours)
The following course should be taken in the fourth year:

- CDO 995 - Clinical Externship 5-23(Spec)

Note: 18 credit hours of CDO 995 in year 4 (9 each semester).

Total: 115 semester hours

Course Descriptions: CDO

CDO 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-methods in research design procedures. Prerequisites: Admission to the CDO major; CDO 494, 439; a statistics course; or admission to the graduate program in Speech-Language Pathology or Audiology. Co-requisites: For Undergraduates Only: CDO 463, 551.

CDO 537 Special Topics in Communication Disorders 1-9(Spec)
Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours.

CDO 545 Communication Disorders and Aging 3(3-0)
Theoretical foundations for communication disorders and aging. Functional communication approaches to: gerontological audiology and speech-language pathology; a continuum of care incorporating prevention and intervention. This course is approved for offering in a distance learning format.

CDO 550 Communication Assessment and Intervention in Children with Autism Spectrum Disorders 3(3-0)
This course examines procedures for assessment of communication, language, and speech of students with autism spectrum disorders, and reviews strategies for enhancing communication and language. Prerequisites: SPE 530; senior or graduate status.

CDO 551 Autism Spectrum Disorders: A Clinical Focus 3(3-0)
This course examines clinical procedures and evidence-based practice for assessment and intervention of communication skills of clients with autism spectrum disorders. Prerequisites: Signed CDO major, 30 hours CDO coursework; or admitted SLP or AuD.

CDO 619 Continuing Registration for Final Research Project 1-10(Spec)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

CDO 632 Counseling Issues in Communication Disorders 3(3-0)
Review of theory and practice of counseling methods and techniques to be used by speech-language pathologists in clinical practice. Prerequisites: Admission to the graduate program in speech-language pathology.

CDO 637 Special Topics in Communication Disorders 3(Spec)
Current topics for each semester listed in Course Search and Registration. Maximum credit 9 hours. Prerequisite: admission to the graduate program in speech-language pathology.

CDO 638 Seminar: Adult and Pediatric Swallowing and Feeding Disorders 3(3-0)
Study of direct and indirect evaluation and treatment of swallowing disorders in patients with neuromuscular disorders, oral, pharyngeal, laryngeal cancer and pediatric feeding disorders. Prerequisites: admission to the graduate program in speech-language pathology.

CDO 639 Hypopharyngeal Visualization 2(1-2)
Practice in manipulation of instrumentation used in visualizing hypopharyngeal structures. Assessment of laryngeal functions for voice and swallowing based on visual images. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 640 Cadaveric Anatomy for Communication Disorders 3(2-2)
The dissection course will cover the anatomy and neuroanatomy which pertains to the head and neck, in relation to articulation, phonation, and respiration for speech. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 643 Disorders of Hearing 3(3-0)
Disorders resulting from diseases, injury of the ear, and lesions of the nervous system from the point of view of audiometric diagnosis. Prerequisite: admission to the AuD Program. This course is approved for offering in a distance learning format.

CDO 702 Infant-Toddler Communication: Assessment and Intervention 2(1-2)
Course reviews normal communication development from birth to three years, describes high-risk populations, and provides information for assessing and intervening with infants and their families. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 704 Language Disorders in Preschool Children 3(3-0)
Course includes identification, assessment of, and intervention for communicative disorders related to closed head injury in children, adolescents and adults. Prerequisite: Admission to the graduate program in Speech-Language Pathology.
Communication Disorders

CDO 708 Language Disorders in School-Age Children 3(3-0)
Study of normal and disordered language and cognitive processes, as they relate to school age children. Prerequisites: CDO 704; admission to the graduate program in speech-language pathology.

CDO 711 Craniofacial Disorders 2(2-0)
Study of a variety of craniofacial anomalies including cleft lip and palate. Topics to include etiologic, evaluation, and treatment from an interdisciplinary perspective. Prerequisites: admission to the graduate program in speech-language pathology.

CDO 712 Physiological Phonetics 2(2-0)
Use of basic equipment in physiological analysis of articulation, phonation, respiration, resonance, and swallowing. Discussion of relevant research and implications for clinical work. Prerequisites: admission to the graduate program in speech-language pathology.

CDO 713 Voice/Resonance Disorders/Laryngectomy Rehabilitation 3(3-0)
This course covers etiology, evaluation, and treatment of persons with voice/resonance disorders and laryngectomies. Prerequisites: Admission to the graduate program in Speech-Language Pathology.

CDO 714 Motor Speech Disorders 3(3-0)
Advanced study in the diagnosis and treatment of motor speech disorders in children and adults. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 717 Aphasia 3(3-0)
Study of assessment and treatment of aphasia. Specific topics include neuroanatomical bases for language, neurolinguistic, clinical research design, ethical service delivery, and family counseling. Prerequisites: Admission to the graduate program in Speech-Language Pathology.

CDO 720 Anatomy and Physiology Underlying Neuro-otology 3(3-0)
In-depth study of the anatomy/physiology of the auditory and vestibular systems. Prerequisites: admission to the Au.D. program.

CDO 721 Audiological Aspects of Pharmacology and Microbiology 3(3-0)
Principles of microbiology and bacterial pathogenesis important to audiology, antibiotic therapy for ear infections, common adverse effects, antibiotic resistance, and strategies that minimize pathogen transmission. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 722 Cognitive-Communicative Disorders of Dementia 3(3-0)
Management of cognitive-communicative disorders of dementia and mild cognitive impairment within the scope of practice for speech-language pathologists. Prerequisites: Admission to the graduate program in Speech-Language Pathology.

CDO 723 Diagnostic Audiology 3(3-0)
Rationale and application of specialized procedures used in the assessment of hearing function. Advanced study of diagnostic methods. Prerequisite: admission to the Au.D. Program.

CDO 724 Applied Speech Science 3(3-0)
Operation and application of basic laboratory equipment used in acoustical research, and the reading and discussion of significant publications on phonetics. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 725 Augmentative and Alternative Communication 3(3-0)
Assessment and treatment of communications disorders resulting from multiple deficits originating from neurological, musculoskeletal, sensory, and cognitive disorders. Verbal and nonverbal management approaches are considered. Prerequisites: Admission to the graduate program in SLF.

CDO 726 Speech Sound Disorders in Children 3(3-0)
Advanced study of the diagnosis and treatment of articulation and phonological disorders in children. Prerequisite: Admission to the graduate program in Speech-Language Pathology.

CDO 739 Stuttering 3(3-0)
Overt and covert characteristics of stuttering behavior including their prevention, etiology, and modification. Prerequisites: Admission to the graduate program in Speech-Language Pathology.

CDO 740 Neuroanatomy 3(3-0)
Comprehensive study of the central nervous system, emphasizing the structural and functional organization of the human brain underlying communication disorders. Prerequisite: Admission to the graduate program in speech-language pathology or admission to the Au.D. Program.

CDO 741 Special Topics in Audiology 1-9(Spec)
Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisites: admission to the Au.D program.

CDO 744 Occupational and Environmental Hearing Conservation 3(3-0)
Effects of noise as a health hazard especially related to hearing. Government regulations regarding noise levels in vocational environments. Prerequisites: admission to the Au.D Program. This course is approved for offering in a distance learning format.

CDO 749 Clinical Practicum in Speech-Language Pathology or Audiology 1-15(Spec)
Experience in clinical practices and applicable documentation with various types of clinical profiles in different settings inclusive of educational and medical speech-language pathology. Up to 15 credits earned in this course will not count in the variable credit total. Prerequisites: Admission to the graduate program in speech-language pathology, completion of 25 hours of clinical observation under the supervision of an ASHA certified speech-language pathologist, and a grade point average (GPA) of at least 3.0 in the CDO graduate courses.

CDO 750 Advanced Hearing Science 3(3-0)
Study of principles and concepts basic to the understanding of the normal hearing process. Prerequisite: admission to the Au.D. program.

CDO 752 Amplification for the Hearing Impaired 3(3-0)
Study of topics related to prosthetic amplification including electroacoustic characteristics, clinical measures, relationship of electro-and psycho-acoustic measures and delivery systems. Prerequisite: admission to the Au.D. Program.

CDO 754 Pediatric Audiology 3(3-0)
Study and evaluation of auditory function of neonates, infants, and young children. Prerequisite: admission to the Au.D. Program. This course is approved for offering in a distance learning format.

CDO 756 Early Identification and Management of Hearing Loss 3(3-0)
Principles underlying early hearing detection and intervention programs including universal newborn screening, assessment and management of hearing loss. Prerequisites: admission to the Au.D program and CDO 754. This course is approved for offering in a distance learning format.

CDO 757 Geriatric Audiology 3(3-0)
This course teaches students about changing health conditions, health care, and the evaluation and treatment of auditory and vestibular disorders in older adults. Prerequisites: Admission to the Au.D. program.

CDO 759 Introduction to Clinical Practicum: Audiology 2-6(Spec)
An introductory experience to clinical practicum in audiology. Prerequisites: admission to the Au.D. program.

CDO 762 Advanced Amplification for the Hearing-Impaired 3(3-0)
Advanced study of amplification for the hearing-impaired including special clinical procedures, research needs, and evolving technology in hearing instruments. Prerequisites: admission to the Au.D. program and CDO 752. This course is approved for offering in a distance learning format.

CDO 763 Audiological Rehabilitation Considerations in Education 3(3-0)
Study of management, educational placement, and remediation strategies for hearing-impaired children. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 764 Audiologic Rehabilitation for Adults 3(3-0)
Focuses on the audiological management of hearing loss in adults. Assessment of communication function and implementation of appropriate remedial strategies are emphasized. Prerequisites: admission to the Au.D. program and CDO 763. This course is approved for offering in a distance learning format.

CDO 765 Cochlear Implants and Other Implantable Technologies 3(3-0)
Advanced study of implantable devices including: clinical procedures, applications to specific clinical populations, research needs, evolving selection, evaluating strategies for treatment of the hearing impaired. Prerequisites: Admission to the Au.D. program.

CDO 769 Intermediate Clinical Practicum: Audiology 3-9(Spec)
Clinical practicum providing for the independent performance of basic audiological procedures, including hearing aid management. Prerequisites: admission to the Au.D. program; completion of CDO 759.

CDO 771 Advanced Auditory Assessment 3(3-0)
Study of advanced diagnostic techniques including acoustic immittance, acoustic reflex and otoacoustic emissions. The clinical management of various disordered clients will be discussed. Prerequisites: admission to the Au.D. program, CDO 731, CDO 751.

CDO 772 Advanced Technology & Practice Aspects of Amplification 3(3-0)
Examination of current and future technologies that relate to amplification and their potential for impact on both clinical and research domains. Prerequisites: admission to the Au.D. program, CDO 752, CDO 762. This course is approved for offering in a distance learning format.

CDO 773 Advanced Amplification Fitting Strategies 3(2-2)
Advanced concepts in the adjustment of electroacoustic characteristics of conventional, programmable, and digital hearing aid circuits for the purpose of selecting appropriate amplification. Prerequisites: admission into the Au.D. program, CDO 752, CDO 762.

CDO 781 Electrophysiological Techniques in Audiology 3(2-2)
Study of evoked responses used in diagnostic audiology. Includes ABR, ALR, P300, ENOG, VER and SSER. Prerequisites: CDO 771, admission to the Au.D. program.

CDO 782 Evaluation and Management of Vestibular Disorders 3(3-0)
Review of the anatomy, physiology of balance, differential diagnostic procedures such as videonystagmography, posturography and rotational testing, and the rehabilitation of the balance disordered patient. Prerequisites: admission to the Au.D program. This course may be offered in an online or hybrid format.
Department of Computer Science (CPS, ITC)

College of Science and Technology

Patrick Kinnicutt, Chairperson

413 Pearce Hall, (989) 774-3774
https://www.cmich.edu/academics/sci_tech/comp_sci

Jesse Eickholt, Ph.D., Machine Learning and Informatics
Lisa Gandy, Ph.D., Natural Language Processing and Text Informatics
Gongzhu Hu, Ph.D., Databases, Distributed Programming, Pattern Recognition
Patrick Kinnicutt, Ph.D., Geostatistics, Science Informatics
Roger Y. Lee, Ph.D., Software Engineering, Object-oriented Modeling
Qi Liao, Ph.D., Computer and Network Security, Economics/Game Theory for Cybersecurity
Tony Morelli, Ph.D., Gaming and Accessibility
S. N. Jayaram Murthy, Ph.D., Multimedia, Pattern Recognition, Data Mining

Ishwar Rattan, Ph.D., Operating Systems, Distributed Processing
Patrick Seeling, Ph.D., Multimedia, Networks, Engineering Education
Lal P. S. Singh, Ph.D., Databases, Intelligent Tutoring Systems
Michael C. Stinson, Ph.D., Neural Networks, Software Engineering
Ahmet Ugur, Ph.D., Evolutionary Programming, Generic logarithms, Biocomputing

The Program

The graduate programs in computer science are supported by a UNIX lab, 3 PC labs and dedicated laboratories for computer graphics, databases, operating systems, networks, and software engineering. In addition, the university’s computer network is available. Some graduate assistantships are available; the application deadline is February 15 for fall and October 1 for spring. Research assistantships may be available depending on funding.

Master of Science (M.S.) in Computer Science

Minimum Totals for Graduation: 30 hours

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

ADMISSION REQUIREMENT SNAPSHOT

GPA: 3.0 (in the last two years of study)
Entrance Exam: GRE
International Application Deadline: July 1 (Fall), Oct. 1 (Spring)

See Admission Requirement Details Below

Conditional admission may be granted upon completion of a bachelor’s degree, including a two semester sequence in a modern programming language with elementary data structures (CPS 180, CPS 181), from an accredited institution with a minimum overall grade point average of 3.0 in the last two years of study, as well as in the programming courses. International students are required to demonstrate English competency. (See section on English Language Competency in this Bulletin).

Regular admission is granted to students who meet the above conditional requirements and have completed the following or the equivalent:

- Computer Architecture
- Data Structures and Algorithms
- Program Languages
- Operating Systems
- Calculus I
- Discrete Mathematics

Conditionally admitted students who have not met all these requirements will be required to get the department chairperson’s permission to register in each graduate course.

Students are required to achieve a minimum grade point average of 3.0 in the above-listed courses.

(Continued)
Degree Requirements

Required Courses I (6 hours)
CPS 541 - Databases 3(3-0)
ITC 510 - Software and Data Modeling 3(3-0)

Required Courses II (12 hours)
Students must choose one track as a cohort:

CPS Track
Select CPS 542 and 691 (required) plus 6 additional hours:
CPS 520 - Software Architecture 3(3-0)
CPS 542 - Analysis and Design of Algorithms 3(3-0)
CPS 585 - Applied Data Engineering 3(3-0)
CPS 610 - Advanced Software Design and Development 3(3-0)
CPS 685 - Pattern Recognition and Data Mining 3(3-0)
CPS 691 - Graduate Seminar 3(3-0)
CPS 710 - Software Engineering Metrics, Models and Management 3(3-0)

ITC Track
Select ITC 520 (required) plus 9 additional hours:
ITC 510 - Software and Data Modeling 3(3-0)
ITC 542 - Analysis and Design of Algorithms 3(3-0)
ITC 585 - Applied Data Engineering 3(3-0)
ITC 610 - Advanced Software Design and Development 3(3-0)
ITC 685 - Pattern Recognition and Data Mining 3(3-0)
ITC 691 - Graduate Seminar 3(3-0)

Other Requirement (3-6 hours)
Select either Plan A or Plan B.

Plan A Requirement (6 hours)
The 30-hour requirements include 24 hours of coursework, a Master's thesis of 6 hours (CPS 798 or ITC 798), and an oral examination on the thesis. For Master's thesis, a Thesis Committee shall be formed according to the procedure outlined in the Thesis, Field Study, or Dissertation section of the Graduate Studies Bulletin.

Select one of:
CPS 798 - Thesis 1-6(Spec)
ITC 798 - Thesis 1-6(Spec)

Plan B Requirement (3 hours)
The 30-hour requirements include 27 hours of coursework and a Plan B Project. A student must complete a substantial written report in computer science or an application of computer science for the Plan B project.

Copies of procedures for such projects are available from the department chairperson. The project will ordinarily include a significant original programming component with a written defense of the programming component and must include evidence of scholarly and creative ability. The project must be supervised while in progress and approved by a committee of two faculty members.

Select one of:
CPS 697 - Independent Study 1-6(Spec)
ITC 691 - Information Technology Project 3(3-0)

Electives (6-9 hours)
At most 3 hours of electives may be non-CPS/ITC designator and must be approved in advance by faculty advisor in the CPS department.

Total: 30 semester hours

Notes:
At least 15 semester hours of courses must be at 600-level or above.
A student who satisfied any of the course requirements prior to entering the program may be excused from that course requirement. However, the 30-hour requirement will not be affected.
Course Descriptions: CPS

CPS 501 Survey of Computer Science 3(3-0)
- Computer organization, low and high level computer languages, various computer applications. Does not count toward CPS major or minor or the M.S. in Computer Science except the Teaching Minor in Computer Science on the secondary education curriculum. This course is approved for offering in a distance learning format.

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. Prerequisites: CPS 340; MTH 175. This course is approved for offering in a distance learning format.

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 530 Simulation of Discrete Event Systems 3(3-0)
- Development of computer models for discrete systems using computer simulation languages. Performance evaluation of computer, industrial and engineering systems. Prerequisite: CPS 181; STA 282 or STA 382.

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. Recommended: CPS 280J.

CPS 541 Databases 3(3-0)
- Physical and logical organizations of databases, database management systems, project involving a student-designed database. Prerequisites: CPS 340 and CPS 370; or ITC 441 and permission of instructor.

CPS 542 Analysis and Design of Algorithms 3(3-0)
- Models of computation. Analysis of algorithms including computing time and space requirements. Efficient algorithm design techniques. Introduction to parallel algorithms. Prerequisite: CPS 340.

CPS 560 Digital Computer Design 3(3-0)
- Design of basic components of a general purpose computer such as CPU, memory, I/O systems, instruction set design. CSC versus RISC debate. Parallel Architectures. Prerequisite: CPS 360.

CPS 565 Computer Networks I 3(3-0)

CPS 575 Computer Graphics 3(3-0)
- Representation of line drawings, handwritings, and three-dimensional surfaces in computers. A plotter and graphics terminal are used. Prerequisites: CPS 181 or MTH 223.

CPS 576 Digital Image Processing 3(3-0)

CPS 585 Applied Data Engineering 3(3-0)
- Study of data engineering concepts and techniques, including data preparation, storage and warehousing, analysis and mining, security, visualization, and applications. Use of data analysis tools. Prerequisites: STA 382.

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)
- Open to students with permission of instructor. May be taken for credit more than once, total credit not to exceed 6 hours.

CPS 603 Computer Information Systems 3(3-0)
- Growth stages of computer usage, information flow, role of MIS manager in providing information to an organization. Does not count on the M.S degree in computer science. Prerequisite: CPS 501. This course is approved for offering in a distance learning format.

CPS 610 Advanced Software Design and Development 3(3-0)
- Advanced topics in software engineering. Developing a large software system using modern software engineering techniques including object-oriented programming and CASE tools. Prerequisite: CPS 410.

CPS 611 Software Verification and Validation 3(3-0)
- Software verification and validation techniques are introduced and their applicability discussed. In-depth study of verification and validation area. Does not count for the MS in Computer Science. Prerequisites: CPS 510 and MTH 175.

CPS 612 Software Project Management 3(3-0)
- Software engineering process, software project organization and management issues, software project economics, software quality assurance, software configuration management, software operations issues. Does not count for MS in Computer Science. Prerequisites: CPS 510. This course is approved for offering in a distance learning format.

CPS 613 Specification of Software Systems 3(3-0)
- Formal models and representations. Specification techniques and tools that support them. Assessment of specification for attributes such as consistency and completeness. Does not count on the MS in Computer Science. Prerequisites: CPS 510 and MTH 175.

CPS 614 Principles and Applications of Software 3(3-0)
- Covers several different methods and languages for expressing designs. The process of assessment is also covered. Does not count for the MS in Computer Science. Prerequisites: CPS 510 and MTH 175.

CPS 615 Software Generation and Maintenance 3(3-0)
- Techniques for performing software generation and maintenance. Alternatives to coding, language concepts, the role of standards and style, the role of tools, performance analysis, regression analysis, other maintenance-specific subjects. Does not count for the MS in Computer Science. Prerequisites: CPS 510.

CPS 619 Continuing Registration for Final Research Project 1-1(0)
- A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

CPS 641 Advanced Topics in Databases 3(3-0)
- Conceptual models. Relational theory. Access methods, query optimization. Concurrency Integrity. Selected current topics, e.g., distributed, temporal and object-oriented databases. Student projects; literature review. Prerequisite: CPS 541.

CPS 650 Theory and Practice of Compiler Construction 3(3-0)
- Automata theory, context-free languages, syntax analysis and parsing techniques. Semantic processing for structured and/or object-oriented programming languages. Code generation and optimization. Prerequisite: CPS 450.

CPS 665 Computer Networks II 3(3-0)
- Principles, design, implementation, performance, security issues and areas of current research in computer networks. Prerequisites: CPS 565; STA 382.

CPS 670 Operating Systems 3(3-0)
- Concepts, communication, synchronization, processes and processors in distribution systems. Distributed file systems. Distributed shared memory systems. Prerequisite: CPS 470.

CPS 675 Advanced Topics in Computer Graphics 3(3-0)
- Detailed study of selected advanced topics in computer graphics. Prerequisite: CPS 575.

CPS 680 Artificial Intelligence 3(3-0)
- Introduction to search, knowledge representation, Machine learning, neural networks, evolutionary and bio-inspired computation techniques, Intelligent agents, and expert systems. Prerequisite: CPS 542.

CPS 685 Pattern Recognition and Data Mining 3(3-0)
- Pattern modeling and recognition. Data mining concepts and techniques including association rules, classification, clustering, outliers, text mining, and trend analysis. Data mining applications. Prerequisites: CPS 410 or STA 584.

CPS 691 Graduate Seminar 3(3-0)
- Current topics in computer science and technology. Literature study. Development, demonstration, and presentation of research and application projects. Technical writing. Prerequisites: 12 hours of graduate courses in CPS.

CPS 695 Professional Field Experience 1-6(Spec)
- Professional field experience via internship or apprenticeship. Must be integral to the student’s program of study. Does not count toward a degree in Computer Science. CR/NC only. Prerequisites: permission of graduate advisor or department chairperson.

CPS 696 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. Pre/co-requisite: See Course Search and Registration. Determined by the specific topics presented.

CPS 697 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.

CPS 710 Software Engineering Metrics, Models and Management 3(3-0)
- Study of modern software design techniques, complexity metrics, testing techniques, models and projects management. Prerequisites: CPS 520, 610.

CPS 798 Thesis 1-6(Spec)
- Research topic in computer science selected by the student and approved by thesis advisor. CR/NC only. Prerequisites: Written permission of advisor and department chairperson.
Course Descriptions: ITC

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, and cutting-edge software and data modeling methods, and techniques. Prerequisites: CPS 410, ITC 341, or graduate standing.

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)
Wireless networks, mobile devices, programming environments. Current contemporary topics on mobile computing. Student projects and literature review. Prerequisite: ITC 510.

ITC 620 Information Security and Privacy 3(3-0)
In-depth analysis of security and privacy issues. Secure network design, risks and vulnerabilities, responding to security breaches, host/server and physical security, and encryption technologies. Prerequisites: ITC 520.

ITC 630 Cloud Computing 3(3-0)
Study the architecture and algorithms of state-of-art cloud computing and services such as distributed computing, virtualization, storage, IaaS, PaaS, SaaS, MapReduce and cloud software tools. Prerequisites: ITC 510.

ITC 686 Big Data Analytics 3(3-0)
Foundation of big data and data analytics lifecycle, structured and unstructured data, analytic methods, MapReduce programming model, big data analytics technologies and tools. Prerequisites: ITC 510.

ITC 691 Information Technology Project 3(3-0)
Current topics in information technology. Development, demonstration, and presentation of research and application projects. Prerequisites: 12 hours of graduate courses in ITC.

ITC 798 Thesis 1-6(Spec)
Research in information technology. CR/NC only. Prerequisites: Written permission of advisor and department chairperson.

Department of Counseling and Special Education
(CED, SPE)
College of Education and Human Services

Holly Hoffman, Chairperson
321 EHS Building, (989) 774-3205

Employee 
Ph.D., Professional Counseling
Allison Arnekrans, Ph.D. (ABD), Professional Counseling
Dawn Decker, Ph.D., Cognitive Impairment
Laura M. Frey, Ph.D., Emotional Impairment
JoDell Heroux, Ph.D. (ABD), Emotional Impairment, Learning Disabilities
Holly Hoffman, Ph.D., Emotional Impairment, Early Childhood Special Education
Andrea Jasper, Ph.D., Cognitive Impairment
Meaghan McCollow, Ph.D. Cognitive Impairment
Terry McGlasson, Ph.D., Professional Counseling
Allison McCrady, Ph.D., Professional Counseling
Suzanne Shellady, Ph.D., Emotional Impairment, Autism, Learning Disabilities
Jordan Shurr, Ph.D., Cognitive Impairment
Jennifer Wirz, Ph.D., Learning Disabilities, Emotional Impairment

Master of Arts (M.A.) in Counseling
Minimum Totals for Graduation: 48 hours

The Counselor Education faculty at Central Michigan University offer courses and programs designed to prepare students to work as counseling personnel in public and private schools, institutions of higher education, community-based social service agencies, and private practice. Many classes are offered afternoons, evenings, and weekends to better accommodate nontraditional students. Students who successfully complete a program for Counselor Education earn a Master of Arts degree in Counseling.

Faculty members include licensed professional counselors. Full-time counselor education faculty hold doctoral degrees in counselor education or counseling psychology. Teaching excellence is a top priority of the faculty.

Admission Requirements, Retention & Termination Standards

Admission Requirement Snapshot
GPA: 2.7
Application Deadline: February 1 for Summer/Fall admission OR September 1 for Spring admission
See Admission Requirement Details Below

Note: See the Global Campus Bulletin for Admission Requirements and Program Requirements for Global Campus students.

Admission Requirements
A complete application includes:
- a graduate application;
- all transcripts from undergraduate and graduate degree work;
- recent (not more than five years old) Graduate Record Exam (GRE) score to be sent directly to the Department of Counseling and Special Education;
- written statement of purpose and general plans for graduate study; and
- Two (2) letters of recommendation (one professional [e.g. supervisor, employer, academic professor/instructor] and one personal [not a family member]).

The GRE assesses verbal reasoning, quantitative reasoning, and analytical writing. Testing centers, test dates and seating availability can be found here: https://mygre.ets.org/greweb/action/RegPortal. When
Selecting a test date, make sure your scores will be reported in time for your application deadlines of February 1st or September 1st. For computer-delivered tests, scores reports are sent to your designated score recipients approximately 10–15 days after your test date, but can take up to six weeks for paper-based scoring. CMU must receive the official score report from the testing company, rather than from the applicant.

The written statement should consist of a 2-3 page APA formatted essay detailing the following: (1) an explanation of why the applicant wants to enter the Counseling program/profession, (2) what skills the applicant possesses that would make the applicant successful in the graduate program in Counseling, and (3) how the Counseling program is congruent with the applicant's career goals.

Two letters of recommendation are required for your application. One should be a professional reference from an academic instructor, current/past supervisor, colleague etc. The second should be a personal reference from a mentor, advisor, volunteer manager, etc. Letters written from family members or friends are not acceptable.

The applicant's cumulative undergraduate grade point average (GPA) (2.7 minimum), 2 letters of recommendation, written statement of purpose and general plans for graduate study, and GRE score all are considered in determining admission. Students who have below a 2.7 minimum undergraduate GPA are still encouraged to apply and will receive consideration. All application materials and GRE score must be received by the Department of Counseling and Special Education before a decision will be made whether to invite the applicant on-campus for the in-person interview process to be conducted on the third Friday in October and March of each year. Application deadlines are: February 1 for Summer/Fall admission and September 1 for Spring admission.

If an applicant has met all of the requirements and is invited on campus for the interview process by department faculty, the applicant will participate in a ½ day in-person interview on the main campus in Mount Pleasant, MI. Attendance at the interview is mandatory and the dates of the interview will be made available in advance for you to make accommodations to be there.

Upon successful completion of the initial screening process and in-person interview, the applicant will be recommended for admission. This decision will be sent to the Office of Research and Graduate Studies and if approved, the applicant will be admitted on a conditional basis. To be eligible for regular admission status, the student must first complete a minimum of 9 semester credit hours of course work in the Counselor Education program with a minimum 3.0 GPA. The student must then submit an application for regular admission (available in the CSE office), which will be reviewed by the Counselor Education program with a minimum 3.0 GPA. All application materials and GRE score must be received before a decision will be made whether to invite the applicant on-campus for the in-person interview process to be conducted on the third Friday in October and March of each year. Application deadlines are: February 1 for Summer/Fall admission and September 1 for Spring admission.

If an applicant has met all of the requirements and is invited on campus for the interview process by department faculty, the applicant will participate in a ½ day in-person interview on the main campus in Mount Pleasant, MI. Attendance at the interview is mandatory and the dates of the interview will be made available in advance for you to make accommodations to be there.

Upon successful completion of the initial screening process and in-person interview, the applicant will be recommended for admission. This decision will be sent to the Office of Research and Graduate Studies and if approved, the applicant will be admitted on a conditional basis. To be eligible for regular admission status, the student must first complete a minimum of 9 semester credit hours of course work in the Counselor Education program with a minimum 3.0 GPA. The student must then submit an application for regular admission (available in the CSE office), which will be reviewed by the Counselor Education program faculty, using established department criteria to determine the student's suitability for regular admission.

In addition, for an applicant interested in school counseling, admission consideration will be based on the following:

- An applicant interested in school counseling who is a certified teacher with a valid Michigan teaching certificate may be admitted to the School Counseling program option. Upon completion of the degree program this student may apply through CMU's EHS Center for Student Services to add a counseling endorsement to his/her teaching certificate.
- An applicant interested in school counseling who does not have a valid Michigan teaching certificate must be admitted to the Professional Counseling program option. This student's program of study will consist of additional course work and require a portion of the internship requirement to be completed in a school setting. Upon completion of the degree program this student may apply for a school counseling license through CMU's EHS Center for Student Services.

Program Requirements

Both the School Counseling and Professional Counseling program options require each candidate to successfully complete a minimum of 48 credit hours. Students will gain knowledge and experience in research, group techniques, counseling theories, counseling techniques, ethics, counseling philosophy, multicultural counseling, testing procedures, career development, and consulting. Practicum and internship experiences will complete the minimum requirements. Elective courses will provide students additional studies and experience in areas of personal interest.

Each student will participate in a supervised counseling experience (practicum) in the Center for Community Counseling and Development on CMU's campus (Global Campus students' practicum will take place in the field), and a field-based 600 hour internship experience. This program also requires successful completion of a comprehensive examination.

The candidate should complete their Authorization of Degree Program form with their assigned advisor after achieving Regular Admission status. Elective courses will be selected with the approval of the advisor. The faculty recommends taking the comprehensive examination during the semester the student intends to graduate.

Progress through the program is based on satisfactory grades (grade point average of “B” or better) and satisfactory evaluations of pre-professional functioning (e.g., demonstration of appropriate personal and professional skills, ethical standards, and behaviors). Serious and persistent difficulties in pre-professional functioning may result in dismissal from the program.

Degree Requirements

Select one of the following options:

Counseling: Professional Counseling

This option is prepares students interested in qualifying for a licensure as a Professional Counselor (LPC) in Michigan, and for students who do not have a valid Michigan teaching certificate and are interested in school counseling licensure in Michigan. The program of study for students seeking school counseling licensure will consist of additional course work and require a portion of the internship requirement to be completed in a school setting. Upon completion of the degree program this student may apply for a school counseling license through CMU's EHS Center for Student Services. Potential work settings would include: community-based social service agencies, institutions of higher education, counseling personnel in public and private schools, and private practice.

Core Courses I (3 hours)

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CED 610</td>
<td>Career Development and Counseling 3(3-0)</td>
</tr>
<tr>
<td>CED 611</td>
<td>Developmental Career Counseling 3(2-1)</td>
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</tbody>
</table>

Core Courses II (30 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>CED 566</td>
<td>Lifespan Development for Counselors 3(3-0)</td>
</tr>
<tr>
<td>CED 620</td>
<td>Introduction to Multicultural Issues in Counseling 3(3-0)</td>
</tr>
<tr>
<td>CED 630</td>
<td>Counseling Ethics and Professional Issues 3(3-0)</td>
</tr>
<tr>
<td>CED 640</td>
<td>Standardized Tests 3(3-0)</td>
</tr>
<tr>
<td>CED 650</td>
<td>Theories and Techniques of Group Counseling 3(3-0)</td>
</tr>
<tr>
<td>CED 660</td>
<td>Counseling Techniques 3(3-0)</td>
</tr>
<tr>
<td>CED 677</td>
<td>Theories of Counseling 3(3-0)</td>
</tr>
<tr>
<td>CED 690</td>
<td>Counseling and Practicum 3(1-3)</td>
</tr>
<tr>
<td>CED 695/SPE 695</td>
<td>Research for Counseling and Special Education 3(3-0)</td>
</tr>
<tr>
<td>CED 765</td>
<td>Professional Counseling and Consulting 3(3-0)</td>
</tr>
</tbody>
</table>

Additional Requirements (3 hours)

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CED 502</td>
<td>Student Development in Higher Education 3(3-1)</td>
</tr>
<tr>
<td>CED 503</td>
<td>Introduction to Community Agency Counseling 3(3-0)</td>
</tr>
<tr>
<td>CED 504</td>
<td>Introduction to School Counseling 3(3-0)</td>
</tr>
</tbody>
</table>

Electives (6 hours)

Select other CED courses, approved SPE courses, or approved transfer credits to bring credit hour total to at least 48.

Plan B Requirement (6 hours)

Satisfied by CED 691 (6 hours) and Comprehensive Examination.

CED 691 - Internship in Counseling 1-6(Spec)

Total: 48 semester hours

(Continued)
Counseling: School Counseling

This option is designed for students with a valid Michigan teaching certificate interested in elementary or secondary school counseling. K-12 counseling, early childhood development, or vocational career counseling. In addition, graduates will meet the academic requirements for licensure as a Professional Counselor (LPC) in Michigan. Upon completion of the degree program this student may apply through CMU’s EHS Center for Student Services to add a counseling endorsement to his/her teaching certificate.

Core Courses I (3 hours)
Select one of the following:
CED 610 - Career Development and Counseling 3(3-0)
CED 611 - Developmental Career Counseling 3(2-1)

Core Courses II (30 hours)
CED 566 - Lifespan Development for Counselors 3(3-0)
CED 620 - Introduction to Multicultural Issues in Counseling 3(3-0)
CED 630 - Counseling Ethics and Professional Issues 3(3-0)
CED 640 - Standardized Tests 3(3-0)
CED 650 - Theories and Techniques of Group Counseling 3(3-0)
CED 660 - Counseling Techniques 3(3-0)
CED 677 - Theories of Counseling 3(3-0)
CED 690 - Counseling Practicum 3(1-3)
CED 695/SPE 695 - Research for Counseling and Special Education 3(3-0)
CED 765 - Professional Counseling and Consulting 3(3-0)

Additional Requirements I (6 hours)
CED 504 - Introduction to School Counseling 3(3-0)
CED 545 - School Counseling Seminar 3(3-0)

Electives (3 hours)
Select other CED courses, approved SPE courses, or approved transfer credits to bring credit hour total to at least 48.

Plan B Requirement (6 hours)
Satisfied by CED 691 (6 hours) and Comprehensive Examination.
CED 691 - Internship in Counseling 1-6(Spec)

Total: 48 semester hours

Master of Arts (M.A.) in Special Education: The Master Teacher

Minimum Totals for Graduation: 33 hours
The Master of Arts in Special Education is designed for students who want advanced study in special education. These programs are designed to provide training experiences leading to the development of those competencies specifically related to working with persons with disabilities in a variety of public school and community settings as a teacher or teacher consultant.

Special Education requires that a minimum of 15 semester hours toward any graduate program be taken on campus. “On campus” is not restricted to Mt. Pleasant. Therefore, students should contact the department chairperson to determine whether a course is considered “on campus.”

The Master Teacher
The Master of Arts Degree in Special Education: The Master Teacher is conceptualized as a degree designed specifically to build upon the strengths of certified educators. It is intended to expand their skills and knowledge base in order to prepare them to assume the role of what the Carnegie Institute refers to as “The Master Teacher.”

Admission Requirements, Retention & Termination Standards

Admission Requirement Snapshot
GPA: 3.00
Application Deadline: At least 6 weeks before desired enrollment; 6-12 weeks for International students

See Admission Requirement Details Below

Beyond the standards of Graduate Studies admission, Special Education requires the following:

1. Prior to admission to a master’s degree program, the candidate must have a bachelor’s degree and a valid Michigan Elementary or Secondary Provisional, Permanent, or Life certificate or special education endorsement. If applicants do not meet this requirement, they should contact the EHS Center for Student Services (421 EHS Building, CMU, Mt. Pleasant, MI 48859, 989-774-3309).

2. Conditional Admission to the Master of Arts degree program in Special Education requires an undergraduate cumulative grade point average of 3.00. (Applicants below the required grade point average may appeal through the chairperson for exception.) Additionally, applicants are required to submit a current statement of purpose for pursuing the degree, and two letters of recommendation regarding the applicant’s performance with Special Education populations.

3. Any applicant who is not admitted to a degree program in Special Education may reapply to that option by following the same procedures for the initial application.

4. After each applicant with Conditional Admission has completed 10 semester hours of graduate study on the program at Central Michigan University with a grade point average of 3.0 or higher, he or she may petition for reclassification for Regular Admission. The faculty will then determine whether Regular Admission will be granted. An Authorization of Degree Program form must be filed at this time by students granted Regular Admission.

Prerequisites:
Special Education endorsement OR the following courses within the last ten years.
SPE 126 - Introduction to Special Education 3(3-0)
SPE 550 - Teaching Culturally Diverse Students 3(3-0)

Retention and Termination Standards
These graduate programs lead to a Master of Arts degree in Special Education. The degree is based upon satisfactory completion of a minimum of 33 semester hours of graduate work and satisfactory demonstration of the competencies identified within the stated objectives and activities of the program.

Degree Requirements
Core Courses (15 hours)
SPE 600 - Current Issues in Special Education 3(3-0)
SPE 679 - Behavioral and Curricular Interventions for Individuals with Mild Disabilities 3(3-0)
SPE 695/CED 695 - Research for Counseling and Special Education 3(3-0)
SPE 750 - Consultant Skills for Special Educators and Counselors 3(3-0)
SPE 785 - Assessment in Special Education 3(3-0)

Additional Requirements (15 hours)
Required classes to be selected in consultation with an advisor.
Plan B Requirement (3 hours)
SPE 790 - Seminar: Investigations and Solutions in Special Education 3(3-0)
AND
Comprehensive Examination

Total: 33 semester hours

Graduate Certificate in Autism
Minimum Totals for Graduation: 18 hours
The 18 credit hour certificate is designed for graduate students who seek advanced training in the field of autism. This program is designed to provide multidisciplinary training experience in developing competencies to work effectively with individuals with autism in a variety of educational and community settings. Students can choose to pursue this certificate alone, or may potentially incorporate it into various master's programs. Credits successfully earned within this graduate certificate program can be transferred toward the Master Teacher program.
ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Admission is through the Office of Research and Graduate Studies. Students pursuing this certificate should have a background in education, psychology, communication disorders or another related discipline and have met the graduate admission requirements for non-degree seeking students. Students pursuing the autism program in conjunction with the Master Teacher program or other graduate program must adhere to the corresponding admission requirements for that graduate program.

Required Courses (15 hours)
CED 550 - Communication Assessment and Intervention in Children with Autism 3(3-0)
PSY 586 - Applied Behavioral Analysis in Education 3(3-0)
PSY 682/EDU 682 - Psychology of Child Development 3(3-0)
SPE 530/PSY 575 - Autism Spectrum Disorder: Characteristics and Etiology 3(3-0)
SPE 531 - Autism Spectrum Disorder: Educational Implications 3(3-0)

Focus
Select one of the following:

Communication Disorders Focus (3 hours)
Those pursuing a graduate certificate with a Communication Disorders focus must also take:
CED 749 - Clinical Practicum in Speech-Language Pathology or Audiology 1-3(Spec)

Psychology Focus (3 hours)
Those pursuing a graduate certificate with a psychology focus must also take:
PSY 792 - Supplemental Supervision 1-3(Spec)

Special Education Focus (3 hours)
Those pursuing a graduate certificate with a Special Education focus must also take:
SPE 526 - Field Experience: Autism 3(Spec)

Total: 18 semester hours

Course Descriptions: CED

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 503 Introduction to Community Agency Counseling 3(3-0)
An overview of issues and trends in community agency counseling. Topics include: history, professional orientation, philosophy, finance, administration, community resources and special concerns. This course is approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

CED 504 Introduction to School Counseling 3(3-0)
History and philosophy of school counseling programs. Role and function of school counselors. Prerequisites: Minimum of 56 credit hours completed 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 515 Basic Group Participation 1(Spec)
Facilitated group counseling where students experience being in the role of client/group participant. CR/NC only. Prerequisite: Junior 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 540 Counseling for Addictions 3(3-0)
Presentation and application of basic theories, techniques and resources for dealing with a broad range of addictive behavior, both substance related and behaviorally focused. Prerequisites: Senior standing or graduate status.

CED 545 School Counseling Seminar 3(3-0)
Discussion and individual investigation into topics and critical incidents germane to schools. Recommendations and solutions by professionals in the field are reviewed. Prerequisites: CED 504.

CED 551 Counseling with Children 3(3-0)
Survey of specialized skills for counseling with children. Emphasis upon the modification of counseling interventions to meet the needs of elementary aged children. Prerequisite: Junior or graduate status.

CED 555 Human Relations Skills 3(3-1)
An introduction to skills utilized in developing helping relationships, emphasizing the person-to-person, day-to-day relationships. This class will be conducted through cognitive and experiential approaches. This course is approved for offering in a distance learning format. Prerequisites: Senior standing or graduate status.

CED 566 Lifespan Development for Counselors 3(3-0)
Course will address the influence of developmental and environmental factors on human behavior, including physical, social, and psychological aspects, and implications for counselors. Prerequisites: Minimum of 56 credit hours completed 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 583 Counseling Aspects of Sexuality 3(3-0)
An introduction to the dynamics of human sexual dysfunctions and the counseling appropriate for therapeutic intervention. Prerequisites: Junior standing or graduate status.

CED 605 The Marriage and Family Therapist 3(3-0)
Study of professional and ethical responsibilities; roles of professional organizations, licensure and certification; legal responsibilities and liabilities; intra-professional cooperation; and development of professional identity.

CED 608 Understanding and Working with Couples and Families 3(3-0)
Introduction to theories and skills for working with couples and families and understanding how relationships influence individual behavior. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

CED 610 Career Development and Counseling 3(3-0)
Critical survey of career development theories. Practical application of career counseling programs. Use of tools and information in career counseling. This course is approved for offering in a distance learning format.

CED 611 Developmental Career Counseling 3(2-1)
Critical survey of career development theories. Application of concepts and strategies of career exploration. Students participate in a supervised experience in teaching career exploration techniques. Prerequisite: Graduate status. Recommended: Completion of, or concurrent enrollment in, CED 650.

CED 612 Work and Career in a Global Society 3(3-0)
Orient students to work and career in a global society by examining past, present and future issues in the workplace. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

CED 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

CED 620 Introduction to Multicultural Issues in Counseling 3(3-0)
An examination of research and practice issues relating to counseling culturally specific groups. Special emphasis on the client/counselor relationship.

CED 621 Orientation to a Culturally Diverse Society 3(3-0)
Orient students to the process of developing competence to live and relate in a culturally diverse society. Prerequisites: Graduate status.

CED 630 Counseling Ethics and Professional Issues 3(3-0)
Supervised discussion of legal and ethical issues that most affect the practice of counseling and related helping professions. This course is approved for offering in an online or hybrid format. Prerequisites: Admission to the M.A. in Counseling.

CED 640 Standardized Tests 3(0)
Selection, evaluation, functions, and interpretation of tests in intelligence, achievement, aptitude, personality, and interests. Emphasis on tests appropriate to the student's future work settings. This course is approved for offering in a distance learning format. Prerequisite: Admission to counseling program.

CED 650 Theories and Techniques of Group Counseling 3(3-0)
The application of group theories and techniques, interpersonal communication skills, and the assessment of group counseling interventions. Prerequisite: Regular admission to M.A. in Counseling. Pre/Co-requisite: CED 660.

CED 660 Counseling Techniques 3(3-0)
Systematic study of the counseling process: stages, intervention strategies and related issues. Both cognitive and experiential approaches will be used. Prerequisites: CED 677; Regular Admission to the M.A. in Counseling.

CED 668 Theory and Process of Family Therapy 3(3-0)
Introduction to the specific theories of marriage and family counseling and examination of the processes involved with each.

CED 670 Independent Study 1-12(Spec)
Study and/or investigation of a special problem with the guidance of a staff member. Prerequisites: Admission to the M.A. in Counseling.
**Course Descriptions: CED**

**CED 677 Theories of Counseling 3(3-0)**
An examination of psychological foundations with counseling theories and approaches. Designed to aid students' development of a personal counseling theory as a guide to practice.

**CED 680 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: Graduate status.

**CED 684 Grief, Loss and Trauma 3(3-0)**
An examination of grief, loss, and trauma, the impact they have on individuals and systems, and how helping professionals can mitigate their effects. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

**CED 685 Counseling Aspects of Grief and Loss 3(3-0)**
An introduction to the dynamics of grief and loss and the counseling procedures appropriate for therapeutic intervention. This course may be offered in an online or hybrid format.

**CED 690 Counseling Practicum 3(1-3)**
Supervised counseling of individuals, families, couples and children. Observation and critique of peer counseling sessions. CR/NC only. NOTE: Prior application by the posted deadline and approval required. Prerequisites: Regular Admission to the M.A. in Counseling; a grade of B or better in CED 660.

**CED 691 Internship in Counseling 1-6(Spec)**
On-the-scene work in selected settings under the supervision of experienced practitioners. Practical experience, observation, and opportunity for relating the theoretical and the actual. Note: Application to register for this course must be filed during the semester prior to registration for approval. CR/NC only. Prerequisites: grade of CR in CED 690.

**CED 695 Research for Counseling and Special Education 3(3-0)**
Presentation and application of designs and procedures pertinent to conducting research in human services. Includes writing a research proposal and manuscript, implementing mini-research project. Identical to SPE 695. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: Regular Admission to the M.A. in Counseling or Special Education; completion of 15 hours or more toward the M.A. in Counseling or Special Education.

**CED 696 Independent Research 3(Spec)**
Completion of research project under the supervision of a faculty advisor. Prerequisite: Successful completion of CED 695 or graduate research methods course.

**CED 698 Thesis 1-6(Spec)**
CR/NC only. For Master's degree candidates. Prerequisites: CED 695.

**CED 700 Advanced Group Facilitation 3(3-1)**
Survey of differing styles of group facilitation. Elements in the helping relationship which improve the quality of interpersonal relationships. "Self-in-therapeutic-interaction" incorporated into a supervised experience. Prerequisites: Regular admission to the M.A. in Counseling; CED 650; permission of instructor.

**CED 701 Facilitation of Play Therapy Sessions 3(3-1)**
Systematic inquiry into the use of play therapy and its relevance to the growth and development of children. Theoretical positions compared and appraised. Supervised experience. Prerequisites: Regular admission to the M.A. in Counseling; permission of instructor.

**CED 765 Professional Counseling and Consulting 3(3-0)**
Focuses on specific knowledge and skills used by professional counselors in a variety of settings. Includes consultation, supervision, diagnostics, and other topics. This course is approved for offering in a distance learning format. Prerequisites: Admission to Counseling program; CED 677.

**CED 780 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. Prerequisite: 15 hours of graduate level counseling coursework.

**CED 790 Advanced Counseling Practicum 3(1-3)**
A continuation of CED 690. Application to register for this course must be filed by the posted deadline prior to registration for approval. Prerequisite: CED 690.

**CED 791 Advanced Internship in Counseling 3(Spec)**
Internship with selected professionals. Opportunity to confirm professional effectiveness in helping professions. Note: Application to register must be filed and approved during the semester prior to registration. CR/NC only. Prerequisites: Grade of CR in CED 690; permission of instructor.

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**Course Descriptions: SPE**

**SPE 500 Parent and Professional Relationships in Special Education 3(3-0)**
Establishing and maintaining collaborative relationships with parents and professionals. Study of effects of an exceptional child on the family and methods for meeting their needs. This course is approved for offering in a distance learning format. Prerequisite: Junior standing or graduate status.

**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. This course is approved for offering in a distance learning format. 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. Identical to EDU 590. Credit may not be earned in more than one of these courses. 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. Grade of C+ or better required to count toward degree. This course may be offered in an online or hybrid format. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and 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 instruction of students who have cognitive disorders. Grade of C+ or better required to count toward degree. This course may be offered in an online or hybrid format. Prerequisites: SPE 126 with a grade of C or better; SPE 322, 323, 324, 519 and 521 with grades of C+ or better; admission to Teacher Education. Graduate students may be admitted with permission of instructor.

**SPE 522 Field Experience-Cognitive Impairment 3-6(Spec)**
University-supervised practice and application of knowledge and strategies for teaching students 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, 323, 324, 519 and 521 with grades of C+ or better; admission to Teacher Education.

**SPE 529 The Gifted Student 3(3-0)**
Characteristics of individuals with superior abilities. Reviews special curricula and teaching procedures for improving the learning and adjustment of these students. This course has been approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

**SPE 530 Autism Spectrum Disorder: Characteristics and Etiology 3(3-0)**
This course will review the behavioral and educational characteristics of students with autism spectrum disorders. Known causes of this disorder will also be examined. Identical to PSY 575. Credit may not be earned in more than one of these courses. Prerequisite: senior 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. This course may be offered in an online or hybrid format. Prerequisites: SPE 530 and senior 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 682, CDO 550, and graduate status.

**SPE 545 Special Education Workshop 1-6(Spec)**
Study of trends, alternative approaches, and innovative curricula in programing for the exceptional student. This course is a variable credit topical workshop. This course is approved for offering in a distance learning format. Prerequisite: Junior standing or graduate status.

**SPE 550 Teaching Culturally Diverse Students 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 curriculum. This course is approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

**SPE 570 Career Development and Transition 3(3-0)**
Lifespan issues for persons with disabilities, stress on curriculum content and instructional strategies that promote interdisciplinary career development and transition education at all age levels. This course is approved for offering in a distance learning format. Prerequisites: SPE 126 with a grade of C or better; junior standing or graduate status.

**SPE 577 Introduction to Specific Learning Disability 3(3-0)**
Systematic introduction to the identification, diagnosis and remediation of specific learning disabilities. This course is approved for offering in a distance learning format. 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. This course may be offered in an online or hybrid format. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and 323 with grades of C+ or better; admission to Teacher Education.

SPE 579 Teaching Students with Emotional Impairment 3(3-0)
Special techniques and materials used in instruction of students who have emotional and behavioral disorders. Grade of C+ or better required to count toward degree. This course may be offered in an online or hybrid format. Prerequisites: SPE 126 with a grade of C or better; SPE 322, 323 with grades of C+ or better; admission to Teacher Education. Graduate students may be admitted with permission of instructor.

SPE 581 Field Experience-Emotional Impairment 3-6(Spec)
University-supervised practice and application of knowledge and strategies for teaching students 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, 323, 324, 578, 579 with grades of C+ or better; admission to Teacher Education.

SPE 585 Early Childhood Special Education 3(3-0)
Current issues in early childhood special education aligned with developmentally appropriate practices, working with families, professionals, and curriculum focused on children birth to eight. This course may be offered in an online or hybrid format. Prerequisites: HDF 100 or EDU 280; or junior standing; or graduate status.

SPE 600 Current Issues in Special Education 3(3-0)
Concentrated study of current special education problems with particular attention to program implementation and development resulting from recent legislation and research. This course may be offered in an online or hybrid format. Prerequisite: admission to a master's program in Special Education.

SPE 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

SPE 640 Administration of Special Education 3(3-0)
Organization and administration of educational programs for exceptional children. Prerequisite: SPE 126. Identical to EDL 675. Credit may not be earned in more than one of these courses.

SPE 645 Special Education Workshop 1-6(Spec)
Study of trends, alternative approaches, and innovative curriculum in planning for individuals with disabilities. Specifically for in-service training. This course may be offered in an online or hybrid format. Prerequisite: permission of instructor.

SPE 665 Independent Study 1-3(Spec)
Individual research or project dealing with a problem in special education. Prerequisite: Approval of department chairperson.

SPE 675 Teaching the Student with Learning Disabilities 3(3-0)
Methods and materials used in teaching students with specific learning disabilities. This course may be offered in an online or hybrid format. Prerequisite: SPE 577.

SPE 678 Education of Students with Severe Emotional Impairment 3(3-0)
Study of children with severe emotional impairment with particular attention to the underlying theories and intervention programs implemented by school personnel and parents. Prerequisites: major in Teachers of Students with Emotional Impairment.

SPE 679 Behavioral and Curricular Interventions for Individuals with Mild Disabilities 3(3-0)
The relationship between behaviors and curriculum in the education of individuals with mild disabilities, focusing on the techniques and practices of various interventions. This course may be offered in an online or hybrid format. Prerequisites: SPE 600; admission to a master's degree program.

SPE 685 Innovative Cognitive Techniques in Special Education 3(3-0)
A study of instructional techniques which have been shown to effective in enhancing the cognitive skills of special education students. Prerequisites: SPE 577, PSY 667, SPE 675.

SPE 689 Graduate Practicum in Special Education 3-6(Spec)
Provides students the opportunity to develop and demonstrate competencies required for working with students with cognitive impairment or emotional impairment or specific learning disabilities. This course may be offered in an online or hybrid format. Prerequisites: Cognitive Impairment focus: SPE 519, SPE 521, SPE 522. Emotional Impairment focus: SPE 578, SPE 579, SPE 581. Specific Learning Disabilities focus: PSY 667, SPE 675, SPE 685. Permission of instructor and application to register for this course must be filed during the semester prior to registration for approval.

SPE 695 Research for Counseling and Special Education 3(3-0)
Presentation and application of designs and procedures pertinent to conducting research in human services. Includes writing a research proposal and manuscript, implementing mini-research project. Identical to CED 695. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: Regular Admission to the M.A. in Counseling or Special Education; completion of 15 hours or more toward the M.A. in Counseling or Special Education.

SPE 720 Seminar: Teaching Students with Severe Cognitive Impairment 3(3-0)
Study and research of selected topics that reflect total education programming for individuals with severe cognitive impairment. This course may be offered in an online or hybrid format. Prerequisite: major in Teachers of Students with Cognitive Impairment.

SPE 741 Seminar: Administration of Special Education 2(2-0)
Provides interaction among special educators to discuss current issues and problems in implementing programs in accordance with special education code and guidelines. This course may be offered in an online or hybrid format. Prerequisites: SPE 640 and background in research methods.

SPE 750 Consultant Skills for Special Educators and Counselors 3(3-0)
The skills, competencies, responsibilities, priorities, and evaluative processes appropriate in a special education teacher/counselor/consultant role are analyzed. This course may be offered in an online or hybrid format. Prerequisites: SPE 600, SPE 679, SPE 765; admission to a master's degree program.

SPE 775 Seminar: Learning Disabilities 3(3-0)
Discussion and research of major issues and current topics in the field of learning disabilities. Prerequisites: SPE 577, SPE 675.

SPE 785 Assessment in Special Education 3(3-0)
Selection, evaluation, administration, and interpretation of tests used in special education. This course may be offered in an online or hybrid format. Prerequisites: SPE 600, SPE 679; admission to a master's program in special education.

SPE 790 Seminar: Investigations and Solutions in Special Education 3(3-0)
Completion of Plan B paper or project under the supervision of a faculty advisor. This course may be offered in an online or hybrid format. Prerequisites: SPE 600, SPE 679, SPE 765, SPE/CED 695; admission to a master's program; permission of instructor.

SPE 798 Thesis 1-6(Spec)
Design of a master's thesis. CR/NC only. Prerequisite: Approval of Committee chairperson.
Department of Earth and Atmospheric Sciences
(GEL, MET)
College of Science and Technology

Leigh Orf, Chairperson
314 Brooks Hall, (989) 774-3179
https://www.cmich.edu/academics/sci_tech/earth_atmos

Martin Baxter, Ph.D., Synoptic Meteorology
Anthony Chappaz, Ph.D., Geochemistry/Water Chemistry
Daria Kluver, Ph.D., Snowfall Prediction and Climate
Sven Morgan, Ph.D., Structural Geology
R. Neil Mower, Ph.D., Tropical Meteorology
Leigh Orf, Ph.D., Mesoscale Meteorology
Mona Sirbescu, Ph.D., Mineralogy
Reed Wicander, Ph.D., Paleontology

Course Descriptions: GEL

GEL 502 Aqueous Geochemistry 3(2-3)
Biogeochemical processes governing the chemistry of water, with a focus on the distribution of natural and anthropogenic chemical species. Prerequisites: CHM 132; BIO 208 or CHM 211 or GEL 310; or graduate status in a CST program. Recommended: GEL 380.

GEL 505 Low Temperature Isotope Geochemistry 4(4-0)
Isotope geochemistry plays an important role in geological, biological, and environmental investigations. The isotopic geochemistry of carbon, oxygen, nitrogen and sulfur will be covered. Prerequisites: CHM 132; GEL 321 or GEL 380; or graduate status in a CST program.

GEL 510 Geomicrobiology 3(3-0)
Examines the fundamental mechanisms microorganisms use to drive the geochemical cycling of Earth’s major elements and contaminants in various environments. Prerequisites: GEL 310 or 320; CHM 132; or graduate status in a CST program.

GEL 515 Environmental Soil Chemistry 3(3-0)
Explores chemical and physical properties of soils, such as soil mineralogy, natural organic matter, redox reactions, precipitation/dissolution, and ion sorption. Prerequisites: GEL 310 or 320; CHM 132; or graduate status in a CST program.

GEL 550 Economic Geology 3(2-3)
Metallic and nonmetallic ore deposits, fossil fuels, and their tectonic settings; general principles of exploration for natural resources within the context of responsible environmental stewardship. Prerequisite: GEL 320 or 321 or graduate status in the College of Science and Technology.

GEL 597 Independent Study 1-6(Spec)
Qualified self-directed students may explore topics of special interest with faculty guidance. More than 3 credits permitted only rarely. Prerequisites: department chairperson and instructor approval.

GEL 650 Geology for Science Teachers 3(2-2)
Study of geologic topics treated in the primary and secondary school curricula according to state benchmarks. Developing and writing field and classroom hands-on activities. This course may be offered in an online or hybrid format. Prerequisites: GEL 102 and 101 or 105, or GEL 100 or 130; GEL 201; admission to the MAT or MA in Education program.

Ph.D. in Earth and Ecosystem Science
This degree is an interdisciplinary program. Please see the index for the page number.

Department of Economics (ECO)
College of Business Administration

Paul Natke, Chairperson
321 Sloan Hall, (989) 774-3870

Vikesh Amin, Ph.D., Royal Holloway University of London; Labor, Education Economics
Bharati Basu, Ph.D., University of Rochester; International Trade, Economic Development
Lawrence Brunner, Ph.D., Johns Hopkins University; Public Finance, Urban Economics
A. Aydin Cecen, Ph.D., Indiana University; International Trade, Mathematical Economics
Debasish Chakraborty, Ph.D., University of Pittsburgh; International Trade, Monetary Theory, Economic Development
Gregory A. Falls, Ph.D., Purdue University; Econometrics, Macroeconomics
James Richard Hill, Ph.D., University of Kentucky; Labor, Sports Economics
James R. Irwin, Ph.D., University of Rochester; Economic History, International Trade, Monetary Theory, Econometrics
Aparna Lhila, Ph.D., Cornell University; Health Economics, Household Economics
Catherine L. McDevitt, Ph.D., University of Rochester; Macroeconomics, Monetary Theory, Public Finance
Paul Natke, Ph.D., University of Notre Dame; Monetary Theory, Managerial Economics
Samuel Raisanen, Ph.D., University of Colorado; Industrial Organization, Applied Game Theory
Jason E. Taylor, Ph.D., University of Georgia; Economic History, Industrial Organization
Linlan Xiao, Ph.D., University of Western Ontario; Econometrics, Mathematical Models

The Program
The Department of Economics at Central Michigan University offers a program leading to the degree of master of arts in economics. The program is designed for two types of students: those who wish to gain marketable skills in applied economics and those who wish to strengthen their preparation in order to continue work toward a doctorate in economics.

Graduate assistantships, which involve the student in either teaching or research, are available on a competitive basis from the Economics Department. Currently, most of the economics graduate students are from countries other than the United States.

The program is designed to meet the needs of the individual student, and students may choose to write a thesis or may select a non-thesis option. The M.A. program is designed so that it can be completed in one calendar year but normally requires three semesters.

Graduate courses in economics may be selected as elective or cognate courses on various graduate curricula including the following: business administration, geography, history, mathematics, political science, statistics.

Requirements of the interdisciplinary curriculum for the Master of Science in Administration are stated in the section on Interdisciplinary Degrees.

Master of Arts (M.A.) in Economics
Minimum Totals for Graduation: 30 hours

Degree requirements will be satisfied by completing the common core and the Plan A or Plan B alternative. Candidates may not offer more than six hours of cognate courses for this 30-hour program. All cognate courses must be selected in consultation with the candidate’s advisor.
There are no specific undergraduate requirements for admission to the Master of Arts degree program in economics. Students who, in the opinion of the Graduate Coordinator, are deficient in background will be advised to take additional courses. Students who do not meet the graduate school requirements may apply for nondegree admission. A maximum of 15 credits earned during non-degree status may be applied toward a graduate degree in Economics.

Core Courses (12 hours)
ECO 535 - Fundamentals of Mathematical Economics 3(3-0)
ECO 585 - Econometrics 3(3-0)
ECO 616 - Advanced Microeconomic Theory 3(3-0)
ECO 620 - Advanced Macroeconomic Theory 3(3-0)

Additional Requirement (18 hours)
Choose one of the following plans:

Plan A: Thesis
- 12 hours of courses approved by an advisor, inclusive of cognate courses.
  ECO 798 - Thesis 1-6(Spec)

Plan B: Non-thesis
- 1. Courses approved by advisor, inclusive of cognate courses - 18 hours.
- 2. Research paper under the direction of a faculty member.

Total: 30 credit hours

ACCELERATED MASTER OF ARTS IN ECONOMICS

Students admitted to the Accelerated Master's Degree Program may earn up to twelve hours of graduate credit toward the MA in Economics for courses taken during their senior year. These courses will count both toward their undergraduate degree and toward their MA degree in Economics. The student will need, first, to be admitted to the program and, second, to have completed the agreed-to plan of study.

Admission Requirements
Within 30 credit hours of graduating with a BS or BS in BA with a GPA of 3.25. In addition, the student should have completed the University competency requirements and ECO 365, ECO 370, MTH 217, and ECO 285 or STA 282.

Plan of Study
Courses to be counted toward both the undergraduate degree and the MA in Economics when taken during the senior year by a student admitted to the Accelerated Master's Degree Program prior to the senior year and completing the courses during the senior year.

Fall Semester: ECO 585 (3 hours); ECO elective (3 hours)
Spring Semester: ECO 685 (3 hours); ECO elective (3 hours)
The electives must be at the 500 level and above and be approved by the graduate coordinator of Economics.

Master of Business Administration (MBA)

See the College of Business Administration for information.

Course Descriptions: ECO
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 ECO 370.
ECO 620 Advanced Macroeconomic Theory 3(3-0)
Analysis of the aggregative economic framework, and application of Keynesian and post-Keynesian macroeconomic theories to the determination of income, employment, and prices.

ECO 622 Seminar in Economic Growth and Development 3(3-0)
Selected topics in economic growth and development. Topics may include growth and development theory, rationality, population, labor, public economics and trade.

ECO 625 Firm Behavior and Game Theory 3(3-0)
Advanced studies of the theory of the firm and modeling strategic behavior. Topics may include transactions costs, collusion, mergers, advertising, brand names, and asymmetric information. Prerequisites: Graduate standing in Economics.

ECO 626 Research in Economic History Post 1870 3(3-0)
In-depth examination of specific topics in economic history, with emphasis placed on the early to mid 20th century, and instruction in economic research.

ECO 630 Comparative Economic Systems 3(3-0)
A systematic analysis of different types of economic systems with respect to the way basic economic problems of resource allocation and income distribution are solved.

ECO 640 Special Topics in Economic Issues 3-6(Spec)
A course organized by individual instructors on the basis of their specialized or experimental interests. Topics will vary from semester to semester.

ECO 646 Advanced Topics in Microeconomic Theory 3(3-0)
A study of advanced topics in Microeconomics such as cover uncertainty, game theory, and asymmetric information using techniques of mathematical proof and real analysis. Recommended: ECO 535, 616.

ECO 650 American Financial Institutions 3(3-0)
Interrelationships among commercial banks, savings and loan associations, finance companies, securities markets, and federal credit institutions; developments, problems, and trends in money markets.

ECO 655 Seminar in International Economics 3(3-0)
Recent developments in trade theory and problems in trade policy; foreign exchange market; national income and balance of payments; and international financial policies.

ECO 657 Advanced Investment Analysis 3(3-0)
Analysis of the principles, techniques, and other factors that determine the values of individual securities and investment portfolios.

ECO 660 Public Finance and Fiscal Policy 3(3-0)
Analyzes fiscal policy and theory of taxation affecting economic welfare and delivery of public goods and services. Includes economic stabilization and fiscal reform considerations. Prerequisites: Graduate admission in economics or permission of the Graduate Coordinator is required of students who enroll in courses at the 600 or 700 level.

ECO 670 Research Methods in Economics 3(3-0)
Thorough comparative analysis of economic methodology and research methods. Prerequisites: ECO 585.

ECO 685 Econometric Applications 3(3-0)
Econometric applications and empirical implementation and interpretation of econometric techniques. Prerequisites: ECO 585.

ECO 690 Independent Research 1-3(Spec)
Prerequisite: Graduate standing in Economics.

ECO 798 Thesis 1-6(Spec)
CR/NC only.
Students may utilize certificate courses (a maximum of six (6) semester credits) to meet program requirements for other degrees, allowing for a concurrent awarding of both a degree and an earned certificate. Students must be accepted into both a degree program and the certificate option to obtain both options and work with their advisor to determine appropriate courses and eligibility. Students may also enroll in the certificate option alone.

A Master’s degree is required for admission into the Graduate Certificate in College Teaching unless one is not offered in your field. Applicants must then provide evidence of disciplinary content knowledge and expertise suitable to being hired to teach at the community college level in their chosen field or discipline. The department of Educational Leadership will be responsible for the final determination of evidence suitability for waiving the Master’s degree requirement.

Required Courses (15 hours)
Select from the following:
EDL 626 - The Adult Learner 3(3-0)
EDL 677 - The American College Student 3(3-0)
EDL 680 - Teaching in Higher Education Settings 3(3-0)
EDL 681 - Teaching with Technology in Higher Education Settings 3(3-0)
EDL 697 - College Teaching Internship 3(3-6)
EDL 763 - The Academic Profession 3(3-0)
Total: 15 semester hours.

Master of Arts (M.A.) in Educational Leadership
Minimum Totals for Graduation: 30 hours
The Master of Arts in Educational Leadership program prepares students with the knowledge and skills needed to effectively lead schools and meet the needs of 21st Century learners. The purpose of this degree is to provide an academic foundation for school leadership and develop the skills and abilities of educational leaders through performance-based learning. Applicants selecting this program are educators who would like to broaden their career options to include school administration. Students completing this program can apply to the Michigan Department of Education and receive initial administrative certification. This certification is a state requirement for school principals.

The Master of Arts in Educational Leadership is a nationally accredited program by the NCATE.

Admission Requirements, Retention & Termination Standards

Admission Requirement Snapshot
GPA: 3.0
Entrance Exam: N/A
Application Deadline: Rolling Application

See Admission Requirement Details Below

1. Applicants must meet the requirements for admission to Graduate Studies.
2. Regular admission in the program requires an undergraduate grade point average of at least 3.0 (on a 4-point scale).
3. Applicants must provide evidence of promise as an administrator by preparing and submitting an admission portfolio directly to the Department of Educational Leadership. The following items must be included in the contents of the portfolio:
   a. a current resume identifying training, experience, and professional accomplishments;
   b. a minimum of two letters of reference (dated and submitted on organizational letterhead) from individuals who can appropriately address the applicant’s potential as an administrator and attest to the applicant’s potential for success in the program;
   c. a two page statement incorporating how the applicant’s program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
      • Vision for student success and achievement,
      • Involvement of all stakeholders,
      • Leadership for a diverse and complex society, and
      • Demonstration of ethical behavior
   d. identification of at least two significant activities which indicate experiences, abilities, and potential for educational leadership. For each activity identified, applicants should clearly describe the activity and the role and responsibilities they assumed, include the number of people involved or impacted by the activity, describe the budget (if applicable) or resources used, and summarize with a self-reflective statement addressing the insight and learning that occurred.

4. Regular admission will be granted only after the admission portfolio has been reviewed and deemed acceptable by a committee of Educational Leadership faculty. Acceptability will be judged on the appropriateness of the contents of the admission portfolio relative to the degree program to which application is being made. The applicant’s statements about beliefs, professional goals, and activities must show evidence of thoughtfulness, thoroughness, and congruence with the degree program to which the application is directed.

Additional Admission Requirements - Must have either a valid teaching certificate and three years of experience or three years of other qualifying experience.

It is advantageous for the applicant to submit the admission portfolio as early as possible. Applicants must submit a complete admission packet and it must be approved before a student is granted regular admission.

Core Courses (21 hours)
Required for State Certification
EDL 656 - Public School Law 3(3-0)
EDL 661 - School and Community Relations 3(3-0)
EDL 662 - School Business Administration 3(3-0)
EDL 670 - The Principalship 3(3-0)
EDL 690 - Administration of School Curriculum 3(3-0)
EDL 694 - Educational Leadership Capstone 3(3-0)
EDL 699 - Leadership Internship 1-15(Spec)

Note: 3 hours of EDL 699.

Required Course (3 hours)
EDL 660 - Research for Educational Leadership 3(3-0)

Emphasis Area
Select one of the following:

Emphasis Area: Supervision (6 hours)
EDL 645 - Charter School Leadership 3(3-0)
EDL 678 - Emerging Issues and Reform Efforts in Educational Leadership 3(3-0)

Emphasis Area: Charter School Leadership (6 hours)
EDL 615 - Educational Technology for Administrators 3(3-0)
EDL 650 - Professional Studies: Special Topics 1-6(Spec)

Emphasis Area: Virtual Education Leadership (6 hours)
EDL 620 - Administration Within Diverse Populations 3(3-0)
EDL 669 - Rural School Leadership 3(3-0)

Professional Portfolio
Students are required to complete a Professional Portfolio that consists of evidence of significant scholarship and ability relating to competence in administration and leadership. The portfolio is developed and maintained by the student during the graduate educational experience. Portfolios should include evidence of his or her competence in the standard of the Educational Leadership Constituents Council (ELCC) standards.

The portfolio is composed of the student’s resume and professional platform.

• Resumé - Detailed educational and professional experiences.
• Professional Platform - A series of personal statements that provide
performance-based evidence that demonstrates mastery of the knowledge and skills required for effective leadership (ELCC, 2011). The platform provides the foundation that guides the student’s thinking and decisions he or she makes about educational leadership issues and speaks to the performance outcomes necessary to effectively lead an organization.

- **Supporting Documents** - The portfolio also includes relevant documents that the student has created throughout his or her graduate experience that support the professional platform and serve as key examples of the student’s scholarly work and performance. Portfolios are developed in the capstone course and require departmental approval prior to graduation.

**Exit Exam**
Praxis SLLA

The Exit Examination is proctored during the capstone course and a passing score is required to complete the program. Students seeking Michigan Administrator Certification must pass the Praxis SLLA administered by ETS®. Students are responsible for scheduling the SLLA at a testing center of their choosing. A full list of locations and registration information can be found at: [https://www.ets.org](https://www.ets.org).

**Total: 30 semester hours**

**Master of Arts (M.A.) in Higher Education Administration**

**Minimum Totals for Graduation: 36 hours**

The Higher Education Administration program is most flexible in terms of allowing students to design their own programs in consultation with their advisor. The program is designed for those seeking leadership positions in colleges and universities.

<table>
<thead>
<tr>
<th>Admission Requirements, Retention &amp; Termination Standards</th>
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<tbody>
<tr>
<td>GPA: 3.0</td>
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<tr>
<td>Entrance Exam: N/A</td>
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<tr>
<td>Internat'l Application Deadline: July 1 (Fall), Oct. 1 (Spring)</td>
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<tr>
<td>See Admission Requirement Details Below</td>
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</tbody>
</table>

1. Applicants must meet the requirements for admission to Graduate Studies.
2. Regular admission in the program requires an undergraduate grade point average of at least 3.0 (on a 4-point scale).
3. Applicants must provide evidence of promise as an administrator by preparing and submitting an admission portfolio directly to the Department of Educational Leadership. The following items must be included in the contents of the portfolio:
   a. a current resume identifying training, experience, and professional accomplishments;
   b. a minimum of two letters of reference (dated and submitted on organizational letterhead) from individuals who can appropriately address the applicant’s potential as an administrator and attest to the applicant’s potential for success in the program;
   c. a two-page statement incorporating how the applicant’s program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
      - Vision for student success and achievement;
      - Involvement of all stakeholders;
      - Leadership for a diverse and complex society; and
      - Demonstration of ethical behavior.
   d. identification of at least two significant activities that indicate experiences, abilities, and potential for educational leadership. For each activity identified, applicants should clearly describe the activity and the role and responsibilities they assumed, include the number of people involved or impacted by the activity, describe the budget (if applicable) or resources used, and summarize with a self-reflective statement addressing the insight and learning that occurred.

4. Regular admission will be granted only after the admission portfolio has been reviewed and deemed acceptable by a committee of Educational Leadership faculty. Acceptability will be judged on the appropriateness of the contents of the admission portfolio relative to the degree program to which application is being made. The applicant’s statements about beliefs, professional goals, and activities must show evidence of thoughtfulness, thoroughness, and congruence with the degree program to which the application is directed.

It is advantageous for the applicant to submit the admission portfolio as early as possible. Applicants must submit a complete admission packet, and it must be approved before a student is granted regular admission.

**Core Courses (21 hours)**

<table>
<thead>
<tr>
<th>Higher Education Administration</th>
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<tr>
<td>EDL 512 - Assessment in Higher Education (3-0)</td>
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<tr>
<td>EDL 636 - Higher Education Law (3-0)</td>
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<tr>
<td>EDL 677 - The American College Student (3-0)</td>
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<td>EDL 757 - Student Development Theory (3-0)</td>
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<td>EDL 764 - Financing of Higher Education (3-0)</td>
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<tr>
<td>EDL 776 - Administration of Higher Education (3-0)</td>
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<tr>
<td>EDL 777 - Student Affairs Administration (3-0)</td>
</tr>
</tbody>
</table>

**Electives (9 hours)**

Select in consultation with an advisor.

**Capstone Project (6 hours)**

All students earning a M.A. in Higher Education Administration will take a written comprehensive exam during their last semester of enrollment in the M.A. program.

**Plan B**

| EDL 696 - Higher Education Practicum (3-6)              |
| EDL 698 - Master’s Colloquium (3-3)                     |

**Total: 36 semester hours**

**Accelerated M.A. in Higher Education Administration**

Advanced undergraduate students in the Leadership in Student Affairs minor who would like to pursue advanced studies in higher education administration may consider an option whereby they can complete their bachelor’s degree and a Master of Arts in Higher Education Administration. The program requirements on the Accelerated Master’s Degree Program are identical to those of the Master of Arts in Higher Education Administration, but allow the student to apply 12 credit hours of graduate coursework toward both their bachelor’s degree and their Master of Arts in Higher Education Administration.

**Admission Criteria for Accelerated Program**

To be eligible for the Accelerated Master of Arts in Higher Education Administration, the student must have:

1. Overall undergraduate grade point average (GPA) of at least 3.0;
2. Completed a minimum of 86 credit hours;
3. Completion of all University Program and Competency requirements;
4. Signed Leadership in Student Affairs minor;
5. Acceptance of applicant’s admission portfolio by the Department of Educational Leadership.

**Application Process:**

1. Undergraduate students seeking admission to the Accelerated Master’s Degree Program must submit the application for admission to Graduate Studies no later than March 15 of the year prior to graduation from their undergraduate program.
2. Applicants must provide evidence of promise as an administrator by preparing and submitting an admission portfolio directly to the Department of Educational Leadership. The following items must be included in the contents of the portfolio:
   a. current resume identifying training, experience, and professional accomplishments;
   b. minimum of two letters of reference (dated and submitted on
Education Leaders who strive for school improvement and increased student learning. The Master of Arts in Teacher Leadership is a nationally accredited program by the Teacher Education Accreditation Council (TEAC).

Students enrolled in this program will take 30 credit hours, selected with their advisor, from the courses listed below:

**Admission Requirement Snapshot**

- **GPA:** 3.0
- **Entrance Exam:** N/A
- **Graduate Application Deadline:** July 1 (Fall), Oct. 1 (Spring)

See Admission Requirement Details Below

1. Applicants must meet the requirements for admission to Graduate Studies.
2. Regular admission in the program requires an undergraduate grade point average of at least 3.0 (on a 4-point scale).
3. Applicants must provide evidence of promise as a teacher leader by preparing and submitting an admission portfolio directly to the Department of Educational Leadership. The following items must be included in the contents of the portfolio:
   a. A current resume identifying training, experience, and professional accomplishments;
   b. A minimum of two letters of reference (dated and submitted on organizational letterhead) from individuals who can appropriately address the applicant’s potential as a teacher leader and attest to the applicant’s potential for success in the program;
   c. A two-page statement incorporating how the applicant’s program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
      i. Vision for student success and achievement;
      ii. Involvement of all stakeholders;
      iii. Leadership for a diverse and complex society; and
      iv. Demonstration of ethical behavior;
   d. Identification of at least two significant activities which indicate experiences, abilities, and potential for educational leadership. For each activity identified, applicants should clearly describe the activity and the role and responsibilities they assumed, include the number of people involved or impacted by the activity, describe the budget (if applicable) or resources used, and summarize with a self-reflective statement addressing the insight and learning that occurred.

**Retention Standards**

The student is responsible for fulfilling all of the requirements for the undergraduate degree and, therefore, additional credits may be taken to complete the Bachelor’s degree requirements during the final year. The student must earn a minimum of a 3.0 GPA or higher in the four courses that count towards the master’s degree. If a student does not earn a 3.0 GPA or higher in each course that is intended to be applied to the graduate degree, they must reapply for admission to the MA in HE program.

**Courses that will count towards the Minor as well as the Master’s degree:**

- EDL 512 Assessment in Higher Education 3(3-0)
- EDL 516 Social Justice Leadership 3(3-0)
- EDL 557 Helping Skills 3(3-0)
- EDL 598 College Student Development 3(3-0)

**Master of Arts in Teacher Leadership**

**Minimum Totals for Graduation: 30 hours**

The Teacher Leadership degree program prepares teachers to be leaders who strive for school improvement and increased student learning. The Master of Arts in Teacher Leadership is a nationally accredited program by the Teacher Education Accreditation Council (TEAC).

The following items must be included in the contents of the portfolio:

- A current resume identifying training, experience, and professional accomplishments;
- A minimum of two letters of reference (dated and submitted on organizational letterhead) from individuals who can appropriately address the applicant’s potential as a teacher leader and attest to the applicant’s potential for success in the program;
- A two-page statement incorporating how the applicant’s program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
  - Vision for student success and achievement;
  - Involvement of all stakeholders;
  - Leadership for a diverse and complex society; and
  - Demonstration of ethical behavior;

**Identification of at least two significant activities which indicate experiences, abilities, and potential for educational leadership.** For each activity identified, applicants should clearly describe the activity and the role and responsibilities they assumed, include the number of people involved or impacted by the activity, describe the budget (if applicable) or resources used, and summarize with a self-reflective statement addressing the insight and learning that occurred.

**Retention Standards**

The student is responsible for fulfilling all of the requirements for the undergraduate degree and, therefore, additional credits may be taken to complete the Bachelor’s degree requirements during the final year. The student must earn a minimum of a 3.0 GPA or higher in each course that is intended to be applied to the graduate degree, they must reapply for admission to the MA in HE program.

**Courses that will count towards the Minor as well as the Master’s degree:**

- EDL 512 Assessment in Higher Education 3(3-0)
- EDL 516 Social Justice Leadership 3(3-0)
- EDL 557 Helping Skills 3(3-0)
- EDL 598 College Student Development 3(3-0)

**Admission Requirement Snapshot**

- **GPA:** 3.0
- **Entrance Exam:** N/A
- **Graduate Application Deadline:** July 1 (Fall), Oct. 1 (Spring)

See Admission Requirement Details Below

1. Applicants must meet the requirements for admission to Graduate Studies.
2. Regular admission in the program requires an undergraduate grade point average of at least 3.0 (on a 4-point scale).
3. Applicants must provide evidence of promise as a teacher leader by preparing and submitting an admission portfolio directly to the Department of Educational Leadership. The following items must be included in the contents of the portfolio:
   a. A current resume identifying training, experience, and professional accomplishments;
   b. A minimum of two letters of reference (dated and submitted on organizational letterhead) from individuals who can appropriately address the applicant’s potential as a teacher leader and attest to the applicant’s potential for success in the program;
   c. A two-page statement incorporating how the applicant’s program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
      i. Vision for student success and achievement;
      ii. Involvement of all stakeholders;
      iii. Leadership for a diverse and complex society; and
      iv. Demonstration of ethical behavior;
   d. Identification of at least two significant activities which indicate experiences, abilities, and potential for educational leadership. For each activity identified, applicants should clearly describe the activity and the role and responsibilities they assumed, include the number of people involved or impacted by the activity, describe the budget (if applicable) or resources used, and summarize with a self-reflective statement addressing the insight and learning that occurred.

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The student is responsible for fulfilling all of the requirements for the undergraduate degree and, therefore, additional credits may be taken to complete the Bachelor’s degree requirements during the final year. The student must earn a minimum of a 3.0 GPA or higher in each course that is intended to be applied to the graduate degree, they must reapply for admission to the MA in HE program.

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- EDL 557 Helping Skills 3(3-0)
- EDL 598 College Student Development 3(3-0)

**Master of Arts in Teacher Leadership**

**Minimum Totals for Graduation: 30 hours**

The Teacher Leadership degree program prepares teachers to be leaders who strive for school improvement and increased student learning. The Master of Arts in Teacher Leadership is a nationally accredited program by the Teacher Education Accreditation Council (TEAC).

Students enrolled in this program will take 30 credit hours, selected with their advisor, from the courses listed below:

**Admission Requirements, Retention & Termination Standards**

1. Applicants must meet the requirements for admission to Graduate Studies.
2. Regular admission in the program requires an undergraduate grade point average of at least 3.0 (on a 4-point scale).
3. Applicants must provide evidence of promise as a teacher leader by preparing and submitting an admission portfolio directly to the Department of Educational Leadership. The following items must be included in the contents of the portfolio:
   a. A current resume identifying training, experience, and professional accomplishments;
   b. A minimum of two letters of reference (dated and submitted on organizational letterhead) from individuals who can appropriately address the applicant’s potential as a teacher leader and attest to the applicant’s potential for success in the program;
   c. A two-page statement incorporating how the applicant’s program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
      i. Vision for student success and achievement;
      ii. Involvement of all stakeholders;
      iii. Leadership for a diverse and complex society; and
      iv. Demonstration of ethical behavior;
   d. Identification of at least two significant activities which indicate experiences, abilities, and potential for educational leadership. For each activity identified, applicants should clearly describe the activity and the role and responsibilities they assumed, include the number of people involved or impacted by the activity, describe the budget (if applicable) or resources used, and summarize with a self-reflective statement addressing the insight and learning that occurred.

**Retention Standards**

The student is responsible for fulfilling all of the requirements for the undergraduate degree and, therefore, additional credits may be taken to complete the Bachelor’s degree requirements during the final year. The student must earn a minimum of a 3.0 GPA or higher in each course that is intended to be applied to the graduate degree, they must reapply for admission to the MA in HE program.

**Courses that will count towards the Minor as well as the Master’s degree:**

- EDL 512 Assessment in Higher Education 3(3-0)
- EDL 516 Social Justice Leadership 3(3-0)
- EDL 557 Helping Skills 3(3-0)
- EDL 598 College Student Development 3(3-0)
leadership capacity in a variety of educational settings. The Ed.S. degree is based upon the satisfactory completion of 30 semester hours of graduate-level coursework. Applicants may choose one of two concentration areas (Administrative Leadership K-12 or Instructional Leadership K-12). The program is aligned to state standards and is approved by the state of Michigan.

Applicants who successfully complete the Administrative Leadership K-12 concentration and the Exit Examination may apply to the Michigan Department of Education for administrative certification.

## Admission Requirements; Retention & Termination Standards

### Admission Requirement Snapshot

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<thead>
<tr>
<th>GPA</th>
<th>Entrance Exam: N/A</th>
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<tbody>
<tr>
<td>Internat'l Application Deadline: July 1 (Fall), Oct.1 (Spring)</td>
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See Admission Requirement Details Below

### Admission

1. Applicants for the Educational Specialist degree must have three years of experience in an educational setting.
2. Applicants must meet the requirements for admission to Graduate Studies.
3. Applicants must have completed a master's degree in education or related field.
4. Applicants must provide evidence of promise as an administrator by preparing and submitting an admission portfolio directly to the Department of Educational Leadership. The following items must be included in the contents of the portfolio:
   a. a current resume identifying training, experience, and professional accomplishments;
   b. a minimum of two letters of reference (dated and submitted on organizational letterhead) from individuals who can appropriately address the applicant's potential as an administrator and attest to the applicant's potential for success in the program;
   c. a two-page statement incorporating how the applicant's program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
      - Vision for student success and achievement,
      - Involvement for all stakeholders,
      - Leadership for a diverse and complex society
      - Demonstration of ethical behavior;
   d. identification of a minimum of two significant activities that indicate experiences, abilities, and potential for educational leadership. For each activity identified, applicants should clearly describe the activity and the role and responsibilities they assumed, include the number of people involved or impacted by the activity, describe the budget (if applicable) or resources used, and summarized with a self-reflective statement addressing the insight and learning that occurred.
5. Regular admission will be granted only after the admission portfolio has been reviewed and deemed acceptable by a committee of Educational Leadership faculty. Acceptability will be judged on the appropriateness of the contents of the admission portfolio relative to the Educational Specialist degree. The applicant's statements about beliefs, professional goals, and activities must show evidence of thoughtfulness, thoroughness, and congruence with the Educational Specialist degree.
6. It is advantageous for the applicant to submit a complete admission's packet, and it must be approved before a student is granted regular admission.

## Exit Exam: Praxis SSA (School Leadership Series-School Superintendent Assessment)

Students are responsible for scheduling the Praxis SSA at a testing center of their choosing. A full list of locations and registration information can be found at: https://www.ets.org/praxis/register/

### Required Courses I (9 hours)

- EDL 651 - Program Review and Evaluation 3(3-0)
- EDL 760 - Leadership Theory and Practice 3(3-0)
- EDL 765 - Organizational Change in Educational Institutions 3(3-0)

### Required Courses II (3 hours)

Select one of the following:

- EDL 700 - Advanced Administrative Research 3(3-0)
- EDL 710 - Action Research 3(3-0)

### Concentrations

Concentration is selected based upon students' needs assessment. The specific courses will be determined in consultation between the student and academic advisor.

#### Concentration I: Administrative Leadership K-12 (12 hours)

- EDL 745 - Administration of the School District 3(3-0)
- EDL 761 - Advanced School and Community Relations 3(3-0)
- EDL 766 - Advanced Educational Law 3(3-0)
- EDL 773 - Instructional Supervision and Leadership 3(3-0)
- EDL 775 - Educational Policy Analysis

**Note:** You may choose only one of EDL 766 OR 775, not both.

#### Concentration II: Instructional Leadership K-12 (12 hours)

- EDL 773 - Instructional Supervision and Leadership 3(3-0)

Plus 9 hours of electives to be chosen in consultation with program advisor.

### Capstone Project (6 hours)

Select either Plan A or Plan B.

- **Plan A: Thesis**
  - EDL 798 - Thesis 1-6(Spec)
- **Plan B: Field Based Project**
  - EDL 699 - Leadership Internship 1-15(Spec)
  - EDL 797 - Field Study 1-6(Spec)

**Total: 30 semester hours**

## Doctor of Education (Ed.D.) in Educational Leadership

### Minimum Totals for Graduation: 63 - 66 hours

The Ed.D. degree in Educational Leadership is designed to provide in-depth knowledge and skills to educational leaders who seek to develop and refine their knowledge and skills to help transform through practice the educational institution. The program emphasizes the application of scholarship (theory) to the improvement of educational practice. It is intended for individuals in educational leadership careers. Students accepted into the program will be part of a cohort. The Ed.S. degree program was also designed for a seamless transition into the Doctor of Education (Ed.D.) in Educational Leadership program if the applicant meets department requirements. Students entering the Doctor of Education program, who have an earned Specialist in Education degree in Educational Leadership from an approved institution, may receive up to a maximum of 27 credits toward the Doctor of Education. Remaining Doctor of Education requirements must be completed at Central Michigan University.
Admission. In order to be considered for admission to the program, an applicant must have completed a master's degree with a minimum graduate grade point average of 3.5 and must have completed three years of professional education experience. (Preference will be given to those with leadership experience.)

There are two application deadlines, April 1 and July 1. Preference will be given to April 1 applicants. Admission will continue until the cohort is filled. A completed application packet will include the following materials:

To the Office of Research and Graduate Studies
1. Graduate Application
2. Application Fee
3. Official transcript(s) pertaining to all previous undergraduate and graduate coursework

To the Department of Educational Leadership:
1. Three Recommendations: Use the EdD Letter of Recommendation Form (found on EDL website) and submit recommendations from three individuals who can attest to the applicant’s leadership ability and potential for success in this program.
2. Personal Statement: A two- or three-page typewritten statement incorporating how the applicant’s program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
   a. Vision for student success and achievement,
   b. Involvement of all stakeholders,
   c. Leadership for a diverse and complex society, and
   d. Demonstration of ethical behavior.
3. A two-page written statement that identifies at least two significant activities which indicate experiences, abilities, and potential for educational leadership. For each activity identified, applicants should clearly describe the activity and the role and responsibilities they assumed, include the number of people involved or impacted by the activity, describe the budget (if applicable) and resources used, and summarize with a self-reflective statement addressing the insight and learning that occurred.
4. GRE Score: An official score report from the Graduate Record Examination (GRE) earned within the last five years.
5. Current Resume or Vita identifying training, experience, and professional accomplishments. Applicant must have at least three years of experience in education or a related field.
6. Signed Declaration of Commitment (found on EDL website)
7. Participation in Doctor of Education Interview/Group Process
8. TOEFL Score: If your native language is not English, submit an official score report from the Test of English as Foreign Language (TOEFL). The TOEFL is required of all non-native speakers unless they have completed two years of university-level coursework in an English-language institution.

The Doctoral Program Committee will make all decisions regarding admissions, selecting the cohort from those interviewed. Preference will be given to those applicants who have a demonstrated history of educational leadership and who have career goals consistent with the expectations of this program. The total application package will be evaluated holistically.

Exam for those who seek Michigan Central Office Certification: Praxis SSA (School Leadership Series-School Superintendent Assessment)

Students are responsible for scheduling the Praxis SSA at a testing center of their choosing. A full list of locations and registration information can be found at: https://www.ets.org/praxis/register/

Program Requirements. Progress through the program is based upon obtaining satisfactory grades (a 3.25 GPA average overall), passing written and oral comprehensive exams, and completing a doctoral dissertation. Students who have an earned Educational Specialist degree may be able to waive some program requirements.

Continuous Progress Policy. In order to encourage degree completion and current knowledge of the dissertation process and research methodology, the faculty in the Department of Educational Leadership enact the following policy:

- EdD students have one calendar year following their final course (EDL 897) or comprehensive exam; whichever is the latter, to successfully defend their dissertation proposal.
- In the event that a student does not successfully defend his/her proposal within the allotted one-year time frame, the student will be required to take or retake EDL 897, in person, within six months of the one-year date. If the course is a retake, the three credits will not count toward the student’s degree completion. If the student fails to take EDL 897 within the required timeframe, the student may be dismissed from the program.
- In the event that a student does not successfully defend his/her dissertation proposal within two years following the final course (EDL 897) or comprehensive exam, whichever is the latter, the student will be required to retake EDL 700, in person, within six months of the two year date. If the student fails to take EDL 700 within the required timeframe, the student may be dismissed from the program. The course retake will not count toward the student’s degree completion.
- In the event that a student has not successfully defended his/her dissertation proposal within three years following his/her final course (EDL 897) or comprehensive exam, whichever is the later, the student will be dismissed from the program.
- Typically EDL 897 and EDL 700 will be offered as week-long, in-person summer courses. If these courses are retaken as part of the continuous progress policy, the credits will not count toward the degree and will not count as continuous enrollment.

Research Requirements (9 hours)
The research component encompasses both quantitative and qualitative research methods. The competencies to be developed are essential to interpreting and evaluating research studies to be encountered in all course work as well as to completing the dissertation requirement.

EDL 700 - Advanced Administrative Research 3(3-0)
EDL 701 - Quantitative Research in Educational Leadership 3(3-0)
EDL 791 - Quantitative Analysis in Educational Leadership 3(3-0)

Academic Core (15 hours)
The academic core component includes all of the critical areas of study for future educational leaders: foundations, organizational and leadership analyses, and the issues which change and dominate over time. The courses are designed to provide students with the underpinnings to understand and to act effectively upon the challenges confronting the educational organization.

EDL 815 - Ethical Leadership 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 899 - Doctoral Seminar 3(3-0)

Concentration (12 hours)
There are four choices from which students may select a concentration, based upon their needs assessment. The specific courses will be determined in consultation between the student and the academic advisor.

Concentration I
K-12 Leadership
EDL 775 - Educational Policy Analysis 3(3-0)
Plus nine hours of electives to be chosen in consultation with program advisor.

(Continued)
Concentration II
K-12 Curriculum
EDL 773 - Instructional Supervision and Leadership 3(3-0)
Plus nine hours of electives to be chosen in consultation with program advisor.

Concentration III
Higher Education Leadership
EDL 876 - Higher Education Policy 3(3-0)
Plus nine hours of electives to be chosen in consultation with program advisor.

Concentration IV
Educational Technology
EDU 707 - Seminar: Issues in Educational Technology 3(3-0)
Plus nine hours of electives to be chosen in consultation with program advisor.

Cognate (9 hours)
The cognate, to be determined jointly by the student and advisor, can be completed in one academic discipline or by taking a combination of courses from more than one academic discipline.

Field-Based Experience (3-6 hours)
This internship experience will assist students in strengthening their leadership competencies. The number of credit hours required will be determined with the student's advisor based upon the student's past professional experience and personal career objectives. Fifty-five contact hours will be required for each credit earned. A letter of understanding will be developed between the student, district, and university supervisor as to the responsibilities and expectations for the experience.

EDL 880 - Doctoral Internship 3-6 Spec

Comprehensive Exams
Students will be expected to take written qualifying exams upon the completion of their academic core classes. Qualifying exams will be administered in the fall and spring of each year. Comprehensive review of all program materials is completed with the successful defense of a student's dissertation proposal. At this point, students are advanced to candidacy.

Dissertation (15 hours)
The student will complete three steps in the dissertation process:
1. the proposal review stage in which there is a formal defense of the dissertation proposal;
2. conducting the research, analyzing the results, and writing the final document;
3. an oral defense of the dissertation.
Total: 63-66 semester hours

Note: Students with an earned Ed.S. may be eligible for fewer than the maximum total program credits indicated if they meet university requirements.

Doctor of Philosophy (Ph.D.) in Educational Leadership

Minimum Totals for Graduation: 66 hours
The Ph.D. degree in Educational Leadership is designed to provide in-depth knowledge and skills to educational leaders who seek to develop and refine their knowledge and skills to help transform through practice. The centerpiece of the Ph.D. curriculum is a personal transformation to a critical understanding of knowledge and the way it is conveyed. The purpose of the program is to develop a critical understanding of knowledge claims, culture, and policy; to be able to engage effectively with multiple perspectives; and to work toward social change and social justice. It is intended for individuals focused on careers in higher education and K-12 administration, including faculty roles, post-secondary schools, and administration of institutions, policy, research centers, community educational institutions and agencies. Students entering the Ph.D. program, who have an earned Specialist in Education degree in Educational Leadership from an approved institution, may receive up to a maximum of 27 credits toward the degree. Remaining Ph.D. requirements must be completed at Central Michigan University.

Research Requirements (15 hours)
The research component encompasses both quantitative and qualitative research methods. The competencies to be developed are essential to interpreting and evaluating research studies to be encountered in all course work as well as to completing the dissertation requirement.
EDL 700 - Advanced Administrative Research 3(3-0)
EDL 800 - Qualitative Research in Educational Leadership 3(3-0)
EDL 801 - Quantitative Analysis in Educational Leadership 3(3-0)
EDL 900 - Advanced Qualitative Analysis in Educational Leadership 3(3-0)
EDL 901 - Advanced Quantitative Analysis in Educational Leadership 3(3-0)

Academic Core I (15 hours)
The academic core component includes all of the critical areas of study for future educational leaders: foundations, organizational and leadership analyses, and the issues, which change and dominate over time. The courses are designed to provide students with the underpinnings to understand and to act effectively upon the challenges confronting the educational organization.
EDL 815 - Ethical Leadership 3(3-0)
EDL 820 - Critical Perspectives of Development Theory 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)
Course Descriptions: EDL

EDL 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.

EDL 516 Leadership for Social Justice 3(3-0)
Examination of social justice perspectives and their application to complex relationships found in and around institutions of learning. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and graduate standing.

EDL 557 Helping Skills in Student Affairs 3(3-0)
Examination of the role of student affairs professionals as helpers through theoretical explorations and practical simulations. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 or graduate standing.

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.

EDL 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 EDL 557 or graduate standing.

EDL 600 Research for Educational Leadership 3(3-0)
Research concepts focused on the needs of educational leaders. Prerequisites: graduate status. This course is approved for offering in a distance learning format.

EDL 609 Administration of Volunteer Programs 3(3-0)
Develops skills necessary to organize a volunteer program or agency. Content includes recruitment, training, supervision, evaluation of volunteers and the development of community partnership programs. This course may be offered in an online or hybrid format.

EDL 610 Grants and Fund Procurement 3(3-0)
Grantsmanship skills for public and private funding. Students will explore funding sources, concept development, evaluation plans, budget preparation, proposal submission, and reviewer practices. This course may be offered in an online or hybrid format.

EDL 612 Methods and Techniques of Training and Development 3(3-0)
The course will examine the theory and research of training and development. Students will conduct and evaluate training and development programs. This course may be offered in an online or hybrid format.

EDL 615 Educational Technology for Administrators 3(3-0)
The development of knowledge, philosophy, skills and practical applications regarding technology for administrators. This course may be offered in an online or hybrid format.

EDL 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

EDL 620 Administration Within Diverse Populations 3(3-0)
Examination of critical issues, trends, and practices relative to cultural diversity that influences the organization and administration of school and other human service organizations. This course is approved for offering in a distance learning format.

EDL 622 Adult Literacy and Society 3(3-0)
A study of the theories of language and literacy and their relationship to the practices of adult education. This course may be offered in an online or hybrid format.

EDL 624 Planning for Instruction in Nontraditional Settings 3(3-0)
Analyze problems and issues in administration of learning programs for students located in nontraditional settings including prisons, malls, churches, factories, and other workplace situations. This course may be offered in an online or hybrid format.

EDL 626 The Adult Learner 3(3-0)
A study of learning in adulthood, how to facilitate that learning, and the characteristics of adult learners. This course may be offered in an online or hybrid format.

EDL 636 Higher Education Law 3(3-0)
An introduction to legal issues in higher education institutions. This course may be offered in an online or hybrid format.

EDL 645 Charter School Leadership 3(3-0)
Application of leadership and systems theories to the administration of charter schools. This course may be offered in an online or hybrid format.

EDL 650 Professional Studies: Special Topics 1-6(Spec)
Research and in-depth study of new knowledge or current problem areas. This course may be offered in an online or hybrid format.

EDL 651 Program Review and Evaluation 3(3-0)
An introduction to program evaluation theory, design, development, and implementation is provided. Content will cover evaluation strategies to plan an applied research study. This course may be offered in an online or hybrid format.

EDL 652 Global Education Studies 3-12(Spec)
Study of educational systems in an international context. Trip destinations will vary. This course may be repeated up to 12 credits if course content is different. Prerequisites: Graduate status.
EDL 656 Public School Law 3(3-0)
The law as it relates to education. This course is designed for students preparing for leadership positions in K-12 schools. This course may be offered in an online or hybrid format.

EDL 658 Teacher Leadership 3(3-0)
An introduction to teacher leadership providing teacher leaders the essential tools to be knowledgeable, reflective, ethical and transformational leaders. This course may be offered in an online or hybrid format.

EDL 660 Principles of Educational Administration 3(3-0)
Philosophy and principles underlying the organization and operation of education in the United States. This course may be offered in an online or hybrid format.

EDL 661 School and Community Relations 3(3-0)
Public relations responsibilities of school board and staff members. This course may be offered in an online or hybrid format.

EDL 662 School Business Administration 3(3-0)
An exploration of school business and resource administration, personnel, and facilities management concepts, with emphasis on current factors affecting site-based administration. This course may be offered in an online or hybrid format.

EDL 663 Human Resources Administration 3(3-0)
The study of effective administration of school personnel issues. This course may be offered in an online or hybrid format.

EDL 667 Administration of Community Education 3(3-0)
Identification of community needs, and organization and management of new and ongoing programs. This course may be offered in an online or hybrid format.

EDL 669 Rural School Leadership 3(3-0)
Current and historical examination of the standards, principles, and practices of rural school leadership. This course may be offered in an online or hybrid format.

EDL 670 The Principalship 3(3-0)
Current standards, principles, and practices relative to school leadership and the Principalship. This course may be offered in an online or hybrid format.

EDL 675 Administration of Special Education 3(3-0)
Organization and administration of education programs for exceptional children. Identical with SPE 640. Credit may not be earned in more than one of these courses.

EDL 676 Administration of Community Colleges 3(3-0)
Structure, organization, and management of the community college. This course may be offered in an online or hybrid format.

EDL 677 The American College Student 3(3-0)
An examination of American college population, how campus environments affect students' collegiate experiences, and how these cultural experiences affect students. This course may be offered in an online or hybrid format.

EDL 678 Emerging Issues and Reform Efforts in Educational Leadership 3(3-0)
This course will examine education reform initiatives and their relationship to emerging issues facing current and future educational leaders within the K-12 school system. This course may be offered in an online or hybrid format.

EDL 680 Teaching in Higher Education Settings 3(3-0)
Study of classroom teaching methods and practices in college environments. Review of active learning techniques, curriculum construction, and student-learning assessment. This course may be offered in an online or hybrid format.

EDL 681 Teaching with Technology in Higher Education Settings 3(3-0)
Leads to the integration of technology in their practice to enhance instructional effectiveness and increase student learning. This course may be offered in an online or hybrid format.

EDL 685 Introduction to Problem Solving in Educational Leadership 3(3-0)
An introduction to the application of the knowledge and skills needed to communicate with organizational members to solve problems and resolve conflict in educational situations and organizations. This course may be offered in an online or hybrid format.

EDL 687 Independent Study 1-6(Spec)
Independent study. This course may be offered in an online or hybrid format. Prerequisite: permission of advisor.

EDL 688 Independent Study 1-6(Spec)
Independent study. This course may be offered in an online or hybrid format. Prerequisite: permission of advisor.

EDL 689 Independent Study 1-6(Spec)
Independent study. This course may be offered in an online or hybrid format. Prerequisite: Permission of advisor.

EDL 690 Administration of School Curriculum 3(3-0)
Study, analysis, and application of administrative principles to the development, implementation, and evaluation of the school curriculum. This course may be offered in an online or hybrid format.

EDL 694 Educational Leadership Capstone 3(3-0)
Capstone seminar to synthesize master's coursework in educational leadership at the P-12 school level. Students will synthesize theory and apply practice through a professional portfolio. This course may be offered in an online or hybrid format.

EDL 695 Readings in Educational Leadership 1-3(Spec)
Independent readings on a specific topic in educational leadership. This course may be offered in an online or hybrid format. Prerequisite: Permission of advisor and instructor.

EDL 696 Higher Education Practicum 3(3-6)
A planned learning experience gained through first-hand observations and operational responsibilities under the direct supervision of a practicing higher education leader. This course may be offered in an online or hybrid format. CR/NC only. Prerequisites: Regular admission to the masters in higher education administration program in the Department of Educational Leadership. Completion of at least 9 core credits in the program. Approval of practicum application.

EDL 697 College Teaching Internship 3(3-6)
Under the direct supervision of a practicing college or university teaching mentor, students develop skills applicable to college-based teaching. CR/NC only. This course may be offered in an online or hybrid format. Prerequisites: Permission of Instructor, approval of internship application.

EDL 698 Master's Colloquium 3(3-0)
Capstone seminar to synthesize master's coursework. Students will apply theory to practice. This course may be offered in an online or hybrid format. Prerequisite: To be taken in the last semester of the MA in Higher Education Administration Program.

EDL 699 Leadership Internship 1-15(Spec)
A planned learning experience gained through first-hand observations and operational responsibilities under the direct supervision of a practicing educational leader. This course may be offered in an online or hybrid format. CR/NC only. Prerequisites: Regular admission and completion of a minimum of 9 credits in a master's or specialist program in the Department of Educational Leadership. Approval of internship application.

EDL 700 Advanced Administrative Research 3(3-0)
The practical application of quantitative, qualitative, mixed methods and action research inquiry are examined to promote empirical decision-making in a variety of educational settings. This course may be offered in an online or hybrid format. Prerequisites: admission to Ed.S. program, EDL 600.

EDL 710 Action Research 3(3-0)
The practical application of action research inquiry is examined to promote empirical decision-making in a variety of educational settings. This course may be offered in an online or hybrid format.

EDL 731 Strategic Planning 3(3-0)
Identification of planning processes to set goals, establish implementation procedures, and evaluate processes and results. This course may be offered in an online or hybrid format.

EDL 745 Administration of the School District 3(3-0)
Study of the school district leadership with special emphasis on the role of the superintendent and district level administrators. This course may be offered in an online or hybrid format.

EDL 750 Professional Studies: Special Topics 1-6(Spec)
Investigation and in-depth study of emerging knowledge or current problem areas. This course may be offered in an online or hybrid format.

EDL 752 Social Justice in Global Studies Education 1-12(Spec)
Study of social justice in education in an international context. Travel destinations will vary. This course may be repeated up to 12 credits if course content is different.

EDL 757 Student Development Theory 3(3-0)
Introduction of student development theories regarding social identity, intellectual and moral development of college students; review of learning and personality theories for understanding student differences. This course may be offered in an online or hybrid format.

EDL 760 Leadership Theory and Practice 3(3-0)
Application of leadership and systems theories to the administration of educational programs. This course may be offered in an online or hybrid format.

EDL 761 School and Community Relations for the District Leader 3(3-0)
The role of the K-12 central office administrator in working with the community. This course may be offered in an online or hybrid format.

EDL 763 The Academic Profession 3(3-0)
Focuses on the organization and function of academic affairs within a college or university. Topics include new faculty issues, academic leadership, curriculum development, and academic socialization. This course may be offered in an online or hybrid format.

EDL 764 Financing of Higher Education 3(3-0)
An analysis of the funding of higher education and the complex relationship between finance and other aspects of higher education administration.

EDL 765 Organizational Change in Educational Institutions 3(3-0)
Fundamental concepts, processes, and procedures concerning the change process. Focus will be on leading, implementing, and sustaining change in educational organizations. This course may be offered in an online or hybrid format.

EDL 766 Advanced Educational Law 3(3-0)
In-depth study of current legal problems affecting education. This course may be offered in an online or hybrid format. Prerequisite: EDL 656.

EDL 767 Public School Finance 3(3-0)
Examine structures and considerations relating to the financing of public school systems within the United States, including taxation, budgets, millages, school facilities, and state funding. This course may be offered in an online or hybrid format.
EDL 768 Advanced Higher Education Law 3(3-0)
- In-depth study of current legal problems affecting higher education. This course may be offered in an online or hybrid format. Prerequisites: Admission to a doctoral program; EDL 636.

EDL 769 Negotiations in Education 3(3-0)
- Theory and practice of negotiations and collective bargaining as it relates in educational organizations. This course may be offered in an online or hybrid format.

EDL 770 Advanced Elementary School Leadership 3(3-0)
- Investigation of advanced leadership of elementary education programs. This course may be offered in an online or hybrid format. Prerequisites: EDL 670.

EDL 772 Advanced Administration of Secondary Schools 3(3-0)
- Study of current management skills and procedures necessary for operating a secondary school. This course may be offered in an online or hybrid format. Prerequisites: EDL 670 and admission to the Specialist in Education program.

EDL 773 Instructional Supervision and Leadership 3(3-0)
- Development of policies and guidelines for leadership of the instructional program in a school. This course may be offered in an online or hybrid format.

EDL 774 Women in Education 3(3-0)
- Study of women's roles as students, faculty, and administrators in educational settings. Emphasis on the identification and study of current issues and gender theories. This course may be offered in an online or hybrid format.

EDL 775 Educational Policy Analysis 3(3-0)
- Identification and analysis of source, function, and effect of policies affecting K-12 education. This course may be offered in an online or hybrid format.

EDL 776 Administration of Higher Education 3(3-0)
- Study of the organization and management of colleges and universities. This course may be offered in an online or hybrid format.

EDL 777 Student Affairs Administration 3(3-0)
- A study of the organization, structure, management, programs, and functions of student affairs administration in post-secondary education. This course may be offered in an online or hybrid format.

EDL 778 Contemporary Issues in Higher Education 3(3-0)
- Study of contemporary issues confronting higher education. Emphasis is on the identification, definition, and study of issues and how educational leaders might address them. This course may be offered in an online or hybrid format.

EDL 790 Critical Issues: Elementary School Leadership 3(3-0)
- Analysis of elementary school leadership issues. This course may be offered in an online or hybrid format.

EDL 792 Critical Issues: Administration of Secondary Schools 3(3-0)
- Analysis of current problems, regulations, laws, and pressures confronting the secondary school principal. Course stresses conflict management and crisis intervention techniques. This course may be offered in an online or hybrid format. Prerequisites: EDL 670 or EDL 772 and admission to the Specialist in Education program.

EDL 797 Field Study 1-6(Spec)
- An extensive study of a specific leadership practice, and a report of appropriate recommendations. Students cannot enroll for both EDL 797 and 798 to fulfill the requirements of a single degree. This course may be offered in an online or hybrid format. CR/NC only.

EDL 798 Thesis 1-6(Spec)
- Students will study a specific leadership problem, culminating in a written research report of appropriate findings. This course may be offered in an online or hybrid format. CR/NC only. Prerequisite: EDL 600 or 700.

EDL 800 Qualitative Research in Educational Leadership 3(3-0)
- This course enables students to apply qualitative research theories, methods and data analysis procedures. Students will practice a variety of applied field-based techniques. This course may be offered in an online or hybrid format. CR/NC only. Prerequisite: EDL 600 or 700. Admission to doctoral program in Educational Leadership.

EDL 801 Quantitative Analysis in Educational Leadership 3(3-0)
- Study, analysis, and application of quantitative analytical principles to the development, implementation, and evaluation of educational practices and programs. This course may be offered in an online or hybrid format. Prerequisites: EDL 600, 700; admission to doctoral program in Educational Leadership.

EDL 815 Ethical Leadership 3(3-0)
- Examination of major leadership and ethical decision making theories. Emphasis is placed on moral leadership practice. This course may be offered in an online or hybrid format. Prerequisites: Admission to the doctoral program in educational leadership.

EDL 816 Social Justice in Education 3(3-0)
- Students will develop an understanding of the theoretical perspectives and their application to complex relationships inherent in moral and political issues in education. This course may be offered in an online or hybrid format. Prerequisites: Admission to a doctoral program and EDL 700 or equivalent.

EDL 820 Critical Perspectives of Development Theory 3(3-0)
- Educational development theory using a critical theoretical lens. Examination will include an exploration of diverse socially constructed identities of individuals and the application to practice. This course may be offered in an online or hybrid format. Prerequisites: Admission to a doctoral program in education.

EDL 825 Culture of Educational Organizations 3(3-0)
- Examination of organizational culture, and the implications for leadership and organizational effectiveness. This course may be offered in an online or hybrid format.

EDL 830 Educational Foundations of Philosophy 3(3-0)
- Critical analysis of the foundations and philosophies of education. This course may be offered in an online or hybrid format. Prerequisites: Regular admission to a doctoral program in education.

EDL 855 Organizational Culture and Change in Educational Institutions 3(3-0)
- Examination of organizational culture and implication on behavior and educational practices. Fundamental concepts, processes, and procedures concerning the change process. This course may be offered in an online or hybrid format. Prerequisites: Admission to the doctoral program in educational leadership.

EDL 860 Organizational Theory in Educational Institutions 3(3-0)
- Focus will be upon the historical development of educational institutions with an emphasis upon organizational theory, systems theory, organizational behavior, and leadership. This course may be offered in an online or hybrid format. Prerequisites: admission to the doctoral program in Educational Leadership.

EDL 864 Economics and Finance of Higher Education 3(3-0)
- This course applies the concepts and methods of economic theory in the analysis and evaluation of issues, policies, and behaviors related to higher education finance. This course may be offered in an online or hybrid format. Prerequisites: EDL 764 or admission to a doctoral program.

EDL 870 Issues in Educational Leadership 3(3-0)
- A study of issues confronting educational leaders. The course provides students the opportunity to relate leadership theory with an examination of current issues. This course may be offered in an online or hybrid format. Prerequisite: Admission to the doctoral program in educational leadership.

EDL 876 Higher Education Policy 3(3-0)
- Examination of higher education policy practices. The integration and synthesis of organizational theory and leadership to address policy issues. This course may be offered in an online or hybrid format. Prerequisites: Admission to the doctoral program in Educational Leadership.

EDL 880 Doctoral Internship 3-6(Spec)
- Real and simulated activities related to preparing for advanced positions in educational leadership under the supervision of a practicing administrator. CR/NC only. This course may be offered in an online or hybrid format. Prerequisites: Admission to the doctoral program in Educational Leadership. Approval of internship application and permission of instructor.

EDL 886 Advanced Problem Solving in Educational Leadership 3(3-0)
- An advanced seminar in problem solving skills to assist educational leaders with interaction strategies. This course may be offered in an online or hybrid format. Prerequisites: EDL 685.

EDL 897 Dissertation Colloquium 3(3-0)
- Development of a doctoral-level dissertation proposal. CR/NC only. This course may be offered in an online or hybrid format. Prerequisites: EDL 800, 801.

EDL 898 Dissertation 1-15(Spec)
- Design and complete the dissertation including data collection, analysis, written report, and oral defense. CR/NC only. Prerequisites: permission of instructor.

EDL 899 Doctoral Seminar 3-6(Spec)
- Orientation to doctoral studies, program procedures, and dissertation issues. Critical review of education foundations and history. This course may be offered in an online or hybrid format. Prerequisites: Admission to the doctoral program in Educational Leadership.

EDL 900 Advanced Qualitative Analysis in Educational Leadership 3(3-0)
- This course provides advanced instruction in qualitative research analysis for doctoral students. Students will work with their own research data using analysis software. This course may be offered in an online or hybrid format. Prerequisite: EDL 800. Recommended: Admission to a doctoral program.

EDL 901 Advanced Quantitative Analysis in Educational Leadership 3(3-0)
- Study, analysis and application of advanced quantitative analytical principles to the development, implementation, and evaluation of educational practices and programs. This course may be offered in an online or hybrid format. Prerequisite(s): EDL 801. Recommended: Admission to a doctoral program.
School of Engineering and Technology (EGR, IET, TEC)
College of Science and Technology

Mohamad Qatu, Director
100 ET Building, (989) 774-3033
https://centrallink.cmich.edu/academics/sci_tech/Engr_Tech

Daniel Chen, Ph.D., Mechanical Engineering/CAD & CAE
Frank Cheng, Ph.D., Industrial Robotics, Automation Manufacturing
Brian DeJong, Ph.D., Mechanical Engineering
Qin Hu, Ph.D., Electrical Engineering
Tolga Kaya, Ph.D., Electrical Engineering, MEMS
David Kelley, Ph.D., Computer Aided Design
Joseph Langenderfer, Ph.D., Mechanical Engineering
Terry Lerch, Ph.D., Mechanical Engineering, mechanics
David Lopez, Ph.D., Manufacturing Management, Quality
Adam Mock, Ph.D., Electrical Engineering, photonics and electromagnetics
Molu Olumolade, Ph.D., Manufacturing Systems
Albert Peng, Ph.D., Electrical Engineering/Electronics
Mohamad Qatu, Ph.d, Mechanical Engineering, Composite structures, automotive engineering, vibrations, engineering design
Dru Wilson, Ph.D., Industrial Technology/Plastics
Kumar Yelamarti, Ph.D., Electrical Engineering, circuit design

The Engineering and Technology Building contains 30 state-of-the-art laboratories and support spaces. Facilities are provided for research and development, automotive technology, plastics technology, mechanical/energy technology, robotics, materials testing, metal fabrication, computer-aided design, manufacturing systems, construction/wood technology, graphic arts, industrial education, safety, electronics instrumentation and design, and engineering design graphics. An auditorium and classrooms are also included in the building.

Since students need a balance of knowledge and applied experience to succeed in today’s industrial environment, ample learning opportunities are provided in CMU's laboratories. Selected resources of the university are available for special projects. Contacts with industry are maintained in a variety of ways.

The interaction between E&T faculty and students is continuous. A well-qualified faculty member counsels and advises each student. E&T faculty not only have appropriate academic credentials, many also have technical certificates, professional state engineering registrations, and other forms of recognition for technical applications expertise.

Master of Science in Engineering
Minimum Totals for Graduation: 30 hours

Admission Requirements; Retention & Termination Standards

<table>
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<th>Admission Requirement Snapshot</th>
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<td>GPA: 3.3</td>
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<td>Entrance Exam: GRE</td>
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See Admission Requirement Details Below

Students pursuing the MS in Engineering degree are required to meet with an engineering advisor during the first semester of attendance at CMU.

MS in 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 is not allowed until after this meeting. Prerequisites are strictly enforced for all engineering classes.

Admission Requirements

Program quality is emphasized by requiring students to meet the following criteria:

1. Accepting only students with:
   a. 3.3 GPA (conditional admission between GPA 3.0 and 3.3) and 720/156+ GRE Quantitative for minimum admission
   b. 563/223/84+ TOEFL for international students
   c. Strong reference letters and statement of purpose by applicants

2. Students must have completed an undergraduate ABET-accredited engineering degree. Students who have degrees from a non-ABET accredited school, or have an undergraduate degree in a different discipline, must show an average GPA of 3.3 in the following classes (or equivalent) to be admitted for the MS in Engineering degree:
   - Science (13 Cr Hrs): CHM 131, PHY 145, PHY 146, PHY 175
   - Mathematics (11 Cr Hrs): MTH 132, MTH 133, MTH 232
   - Engineering (15 Hrs): EGR 251, EGR 253, EGR 255, EGR 356, and EGR 358; or EGR 190, EGR 290, EGR 298, EGR 391 and EGR 396

If needed, the school may require students to pass an entrance exam to show competency in the above subjects.

Retention & Termination Standards

In order to remain in the MS in Engineering program, 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 degree Credit/No Credit (except the EGR 798 course).
3. At least 24 credits must be taken at CMU to graduate with this degree.
4. If a student does not continue to meet the retention standards, s/he may be asked to withdraw. The school maintains the right to terminate a student if s/he is not progressing satisfactorily.
5. The student who does not meet degree requirements by the end of the 4th year will be terminated.

Required Courses I (6 hours)
EGR 600 - Advanced Engineering Analysis 3(3-0)
EGR 601 - Advanced Engineering Experimentation 3(2-2)

Required Courses II (6-15 hours)
Select 6-15 credit hours in consultation with the student’s advisor and advisory committee.

EGR 553 - Mechanical Vibrations 3(3-0)
EGR 554 - Mechanical Controls 3(3-0)
EGR 576 - Mechanics of Composite Materials 3(3-0)
EGR 578 - Advanced Mechanics of Materials 3(3-0)
EGR 588 - Photonics 3(3-0)
EGR 591 - CMOS Circuit Design 3(2-2)

Retention & Termination Standards

In order to remain in the MS in Engineering program, 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 degree Credit/No Credit (except the EGR 798 course).
3. At least 24 credits must be taken at CMU to graduate with this degree.
4. If a student does not continue to meet the retention standards, s/he may be asked to withdraw. The school maintains the right to terminate a student if s/he is not progressing satisfactorily.
5. The student who does not meet degree requirements by the end of the 4th year will be terminated.
Course Descriptions: EGR

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 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 Graduate Student in Engineering.

EGR 576 Mechanics of Composite Materials 3(3-0)
Covers composite material mechanics with emphasis on selection, analysis, and use. Stiffness and strength theories treats composite beams and plates for static and dynamic loads. Prerequisites: EGR 255, 355; MTH 233; or Graduate Student in Engineering.

EGR 578 Advanced Mechanics of Materials 3(3-0)
Stress and 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; or Graduate Student in Engineering.

EGR 588 Photonics 3(3-0)
A study of optical phenomena and its application to engineering problems. Topics include ray optics, beam optics, guided wave optics, lasers and applications thereof. Prerequisite: EGR 388 or Graduate Student in Engineering.

EGR 591 CMOS Circuit Design 3(2-2)
Design and simulation of analog integrated circuits and systems using transistor level differential amplifiers, operational amplifiers, oscillators, and data converters. Prerequisites: EGR 292, 392; 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 or Graduate Student in Engineering.

EGR 595 Nanoscale Transistors 3(3-0)
Conceptual framework that underlies the microscopic viewpoint using examples related to the emerging field of nanoscale transistors. Prerequisites: EGR 487 or 491 or graduate standing.

EGR 597 Special Topics in Engineering 1-6(Spec)
Intensive study of selected engineering topics not included in a regular course. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisite: Permission of instructor.

EGR 600 Advanced Engineering Analysis 3(3-0)
Modeling and analysis of advanced engineering systems. These include linear and nonlinear, discrete and continuous systems typically found in mechanical and electrical engineering. Prerequisite: Admittance to the graduate program in engineering.

EGR 601 Advanced Engineering Experimentation 3(2-2)
Develop and conduct experiments involving advanced data acquisition and analyses in engineering. Perform uncertainty and error analysis of collected data. Prerequisite: Graduate standing in engineering.

EGR 637 Directed Research in Engineering 1-6(Spec)
Directed research supervised by an Engineering faculty member. Repeatable up to 6 credits. Prerequisite: Permission of instructor.

EGR 685 Seminar: Current Topics in Engineering 1-3(Spec)
Discussion of current research and application topics in engineering. Basic skills of oral presentation and literature search will be introduced. Prerequisite: Permission of the instructor.

EGR 697 Special Topics in Engineering 1-6(Spec)
Study of advanced engineering topics not included in regular graduate courses. Repeatable up to 6 credits. Prerequisite: Permission of instructor.

EGR 798 Thesis Research 1-6(Spec)
The thesis research supervised by an engineering faculty. May be repeated as needed. Prerequisites: EGR 600; Graduate Student in Engineering.

Course Descriptions: IET

IET 500 Production Concepts 3(3-0)
Comprehensive review of current factors which 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; or graduate standing and statistics competency.

IET 501 Application of Industrial Management Principles 3(3-0)
A study of industrial management as a process of coordination that exhibits different characteristics 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 or graduate standing and statistics competency.

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 or graduate standing.

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 or graduate standing.

IET 525 Hazardous Materials Technology 3(3-0)
The course covers hazardous materials and related health, safety, and regulatory issues for persons conducting, supervising, and managing field activities. Prerequisites: IET 327; CHM 120 or CHM 131; junior or senior standing.

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; or senior/graduate standing and permission of instructor.

IET 527 Industrial Safety Management 3(3-0)
A comprehensive study of safety management systems and their implications related to accident cost analysis and to programs which comply with state and federal standards. Prerequisite: IET 327.

IET 532 Careers and Technology for Children 3(2-2)
Developing interdisciplinary instructional units, manipulatives, and pedagogies to provide K-12 students with meaningful career awareness, exploration, and preparation experiences utilizing industrial materials, tools, and processes. Prerequisite: junior or senior status in teacher education.

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.

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 or Graduate Standing.

IET 551 Coordination in Vocational Education 3(3-0)
Duties, problems, and techniques used in organizing and supervising cooperative education programs, partially designed to meet state certification requirements. Identical to BIS 451. Credit may not be earned in more than one of these courses. Prerequisite: Signed authorization.

IET 561 Light Frame Construction Workshop 3(0-6)

IET 564 Teaching Technology in Technology Education 3(3-0)
A comprehensive study of construction safety standards, practices, and procedures. 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.

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 or graduate standing.
Nicole Sparling, Chairperson
215 Ansprech Hall, (989) 774-3171
Kristen McDermott, Coordinator of Graduate Studies
Anne Alton, Ph.D., Children's Literature, British Literature
Jeffrey Bean, M.F.A, Creative Writing and Poetry
Ari Berk, Ph.D., Myth, Folklore, Native American Literature
Meghan Block, Ph.D, English Education
William Brevda, Ph.D., American Literature
Elizabeth Brockman, Ph.D., English Education, Composition
April Burke, Ph.D, Linguistics
Tracy Davis, Ph.D, Linguistics
JoEllen DeLucia, Ph.D. British Literature
Darrin Doyle, Ph.D., Creative Writing, Fiction
Maureen Eke, Ph.D, African-American Literature and World Literature
Robert Fanning, M.F.A, Creative Writing and Poetry
Amy Carpenter Ford, Ph.D, English Education
Richard Forest, Ph.D, Linguistics
Mark Freed, Ph.D., Literary Theory
Pamela Gates, Ph.D., Children's Literature, English Education
Susan Griffith, Ph.D., English Education, Children's Literature
Desmond Harding, Ph.D., British Literature
Troy Hicks, Ph.D., English Education
Cathy Hicks-Kennard, Ph.D., Linguistics
Melinda Krath, Ph.D., Technical Writing
Daniel Lawson, Ph.D. Rhetoric, Writing Center Director
Kristen McDermott, Ph.D., British Literature
Gretchen Papazian, Ph.D., Children Literature, American Literature
Daniel Patterson, Ph.D., American Literature
John R. Pfeiffer, Ph.D., Bibliography, English Literature
Ronald Primeau, Ph.D., Rhetoric, Romantic Literature
Matthew Roberson, Ph.D., Creative Writing, Fiction
Susan Schiller, Ph.D., Composition, Rhetoric
Nate Smith, Ph.D., British Literature
Joseph Sommers, Ph.D., Children's Literature
Nicole Sparling, Ph.D., Latin American and World Literature
William Spruille, Ph.D., Linguistics
Marcy Taylor, Ph.D., Composition, English Education
William Wandless, Ph.D., British Literature
Jeffrey Weinstock, Ph.D., American Literature

The Department of English at Central Michigan University offers the following graduate degrees: a Master of Arts in English Language and Literature, a Master of Arts in Language and Literature with an concentration in Creative Writing, a Master of Arts in English Language and Literature with a concentration in Children's/Young Adult Literature, a Master of Arts in English Composition and Communication, and a Master of Arts in TESOL (Teaching English to Speakers of Other Languages). A description of each degree program follows.

Graduate classes are small and provide the student with ample opportunity for interaction with professors and other graduate students. Graduate-level classes are offered in the late afternoons and evenings.
Master of Arts (M.A.) in English Language and Literature
Minimum Totals for Graduation: 30 hours
This program is designed to meet the needs of students who wish to teach English at a community college, for students seeking preparation for advanced study at the doctoral level at another university, or for students teaching English at the secondary level who wish to pursue more study in the discipline.

Students must complete at least 15 of their total semester hours at or above the 600 level. At the advisor's discretion up to six hours from other departments may be included.

Admission Requirements, Retention & Termination Standards
Admission Requirement Snapshot
GPA: 3.0 (and 3.0 in major)
Entrance Exam: N/A
International Application Deadline: July 1 (Fall), Oct. 1 (Spring)
See Admission Requirement Details Below

To become a candidate for the degree of Master of Arts in English Language and Literature, a student normally will be expected to have had an undergraduate major or minor in English with a grade point average of at least 3.0 on a four point scale and a cumulative grade point average of at least 3.0. For applicants whose native language is not English, a TOEFL score of 550 (213 CBT) and a TWE of at least 5, or a MELAB of 85, are required for admission. All students applying for admission to the Language and Literature program must submit a 7-10 page sample of analytical writing that shows an aptitude to do graduate-level work in English.

Required Courses I (3 hours)
Literary Criticism
Select one of the following:
ENG 535 - History of Literary Criticism 3(3-0)
ENG 636 - Seminar in Critical Problems 3(3-0)

Required Courses II (3 hours)
Language or Linguistics
Select one of the following:
ENG 545 - Chaucer 3(3-0)
ENG 570 - Old English 3(3-0)
ENG 672 - Applied Linguistics in Written Communication 3(3-0)

Required Courses III (3 hours)
Professional Methodologies
ENG 602 - Research Materials and Methods 3(3-0)

Required Courses IV (6 hours)
Two 600-level seminars in literature

Capstone Project (15 hours)
Choose one of the following plans:

Plan A
9 additional hours of course work authorized by the advisor and planned with the student, plus thesis (6 hours) and oral examination over thesis.
ENG 799 - Thesis 1-6(Spec)

Plan B
15 additional hours of course work, authorized by the advisor and planned with the student, plus a scholarly paper.

Total: 30 semester hours

Master of Arts (M.A.) in English Language and Literature: Creative Writing Concentration
Minimum Totals for Graduation: 30 hours
This program is designed to meet the needs of students who wish to teach English at a community college, for students seeking preparation for advanced study at the doctoral level at another university, or for students teaching English at the secondary level who wish to pursue more study in the discipline.

Admission Requirements, Retention & Termination Standards
Admission Requirement Snapshot
GPA: 3.0 (and 3.0 in major)
Entrance Exam: N/A
International Application Deadline: July 1 (Fall), Oct. 1 (Spring)
See Admission Requirement Details Below

To become a candidate for the degree of Master of Arts in English Language and Literature, a student normally will be expected to have had an undergraduate major or minor in English with a grade point average of at least 3.0 on a four point scale and a cumulative grade point average of at least 3.0. For applicants whose native language is not English, a TOEFL score of 550 (213 CBT) and a TWE of at least 5, or a MELAB of 85, are required for admission.

The student must submit a portfolio of original poetry or fiction for approval before selecting this concentration.

Required Courses I (3 hours)
Literary Criticism
Select one of the following:
ENG 535 - History of Literary Criticism 3(3-0)
ENG 636 - Seminar in Critical Problems 3(3-0)

Required Courses II (3 hours)
Language or Linguistics
Select one of the following:
ENG 545 - Chaucer 3(3-0)
ENG 570 - Old English 3(3-0)
ENG 672 - Applied Linguistics in Written Communication 3(3-0)

Required Courses III (3 hours)
Professional Methodologies
ENG 601 - Graduate Composition 3(3-0)
ENG 602 - Research Materials and Methods 3(3-0)

Required Courses IV (3 hours)
One 600-level seminars in literature

Required Courses V (3 hours)
Craft Courses
Select one of the following:
ENG 621 - The Craft of Fiction 3(3-0)
ENG 622 - The Craft of Poetry 3(3-0)

Thesis Requirement (6 hours)
ENG 799 - Thesis 1-6(Spec)

Other Requirements (6 hours)
Select one of the following:
ENG 691 - Seminar Writing Fiction 3-6(Spec)
ENG 692 - Seminar in Writing Poetry 3-6(Spec)

Electives (3 hours)
Hours authorized by the advisor and planned with the student.
Total: 30 semester hours
Master of Arts (M.A.) in English Language and Literature: Children's/Young Adult Literature

Minimum Totals for Graduation: 30 hours

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</tbody>
</table>

To become a candidate for the degree of Master of Arts in English Language and Literature, a student normally will be expected to have had an undergraduate major or minor in English with a grade point average of at least 3.0 on a four point scale and a cumulative grade point average of at least 3.0. For applicants whose native language is not English, a TOEFL score of 550 (213 CBT) and a TWE of at least 5, or a MELAB of 85, are required for admission.

Required Courses I (3 hours)

Literary Criticism
Select one of the following:
ENG 535 - History of Literary Criticism 3(3-0)
ENG 636 - Seminar in Critical Problems 3(3-0)

Required Courses II (3 hours)

Language or Linguistics
Select one of the following:
ENG 545 - Chaucer 3(3-0)
ENG 570 - Old English 3(3-0)
ENG 672 - Applied Linguistics in Written Communication 3(3-0)

Required Courses III (3 hours)

Professional Methodologies
ENG 602 - Research Materials and Methods 3(3-0)

Required Courses IV (6 hours)

Two 600-level seminars in literature

Required Courses V (3 hours)

ENG 681 - Seminar in Children’s Literature 3-9(Spec)

Required Courses VI (6 hours)

Children’s Literature
Select two of the following:
ENG 580 - Literature for Young Adults 3(3-0)
ENG 581 - The History of Children’s Literature 3(3-0)
ENG 582 - Cultural Pluralism in Young Adult and Children's Literature 3(3-0)
ENG 583 - The Heroic Tradition in Children’s Literature 3(3-0)
ENG 681 - Seminar in Children's Literature 3-9(Spec)

Note: If the student selects ENG 681 for Required Courses VI, the topic of the seminar must differ from that taken to fulfill Required Courses V.

Capstone Project (6 hours)
Choose one of the following plans:

Plan A (6 hours)
Thesis (6 hours) and oral examination over thesis.
ENG 799 - Thesis 1-6(Spec)

Plan B (6 hours)
6 additional hours of course work, authorized by the advisor and planned with the student, plus a scholarly paper.

Total: 30 semester hours

Master of Arts (M.A.) in English Composition and Communication

Minimum Totals for Graduation: 30 hours

The Master of Arts degree in English Composition and Communication is a program of courses centering on theory and practice in non-fiction forms of writing. It prepares graduate students to be career writers composing in disciplines other than English, professional writers composing within their own disciplines, creative writers composing in non-fiction forms, or teachers specializing in non-fiction forms. It allows for breadth of background and experience in composition as well as concentration in a selected area of interest. Required courses ground students in writing, editing, and rhetorical analysis, while elective courses give the opportunity to focus on creative, professional and pedagogical development. Students in this program will have priority access to designated English Department computer facilities throughout their course of study.

<table>
<thead>
<tr>
<th>Admission Requirements, Retention &amp; Termination Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA: 3.0 (and 3.0 in major)</td>
</tr>
<tr>
<td>Entrance Exam: N/A</td>
</tr>
<tr>
<td>Internatl Application Deadline: July 1 (Fall), Oct. 1 (Spring)</td>
</tr>
</tbody>
</table>

To become a candidate for the degree of Master of Arts in English Composition and Communication, a student normally will be expected to have a grade point average of at least 3.0 on a four point scale and a cumulative grade point average of at least 3.0, or demonstrate equivalent academic or professional experience. All candidates for admission to this program must submit a portfolio of representative writing. Students should contact the Graduate Coordinator for a description of what this portfolio should contain and how it should be put together. For applicants whose native language is not English, a TOEFL score of 550 (213 CBT) and a TWE of at least 5, or a MELAB of 85, are required for admission.

Students must complete at least 15 of their total semester hours at or above the 600 level.

Required Courses (9 hours)

ENG 601 - Graduate Composition 3(3-0)
ENG 637 - Seminar in Rhetoric and Composition 3-6(Spec)
ENG 638 - Seminar in Textual Analysis and Editing 3(3-0)

Other Requirement (6 hours)

Select a thesis, internship, or Plan B as follows:
ENG 718 - Internship: Teaching 6(Spec)
ENG 719 - Internship: Professional Communication 6(Spec)
ENG 799 - Thesis 1-6(Spec)

Plan B: Exit Portfolio plus 6 additional hours of restricted electives.

Restricted Electives (9 hours)

Advanced courses from among any of the following chosen in consultation with an advisor:
ENG 503 - Document Design 3(3-0)
ENG 504 - Technical Editing 3(3-0)
ENG 510 - Writing Center Practicum 1-3(Spec)
ENG 514 - Language and Media Discourse 3(3-0)
ENG 517 - Reading and the English Classroom 3(3-0)
ENG 519 - Teaching of Composition 3(3-0)
ENG 539 - Seminar in Major Nonfiction Writers 3-9(Spec)
ENG 571 - Teaching of English to Speakers of Other Languages 3(3-0)
ENG 573 - Linguistics and Reading 3(3-0)
ENG 603 - Seminar in Technical & Professional Communication 3-6(Spec)
ENG 614 - Practicum in Teaching College Composition 3(3-0)
ENG 615 - Problems in Teaching English 3(3-0)
ENG 618 - Empirical Research Methods in English 3(3-0)
ENG 637 - Seminar in Rhetoric and Composition 3-6(Spec)
ENG 672 - Applied Linguistics in Written Communication 3(3-0)
ENG 675 - Seminar in English Linguistics 3(3-0)
ENG 691 - Seminar Writing Fiction 3-6(Spec)
ENG 693 - Seminar in Writing Creative Nonfiction 3-6(Spec)

Note: ENG 614 is required for all Teaching GAs.

Unrestricted Electives (6 hours)
Advanced courses chosen in consultation with an advisor.
Total: 30 semester hours

Master of Arts (M.A.) in TESOL
Teaching English to Speakers of Other Languages

Minimum Totals for Graduation: 30 hours

Course Descriptions: ENG

ENG 503 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 or hybrid format. Prerequisites: Graduate standing or ENG 201 with a C or better. Recommended: ENG 303.

ENG 504 Technical Editing 3(3-0)
Methods and technologies used in editing and publishing technical documents in print and electronic media; publication management and production. This course may be offered in an online or hybrid format. Prerequisites: Graduate standing or ENG 201 with a B or better and 86 credit hours completed. Recommended: ENG 303.

ENG 510 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. May be offered as 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 of Composition 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 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 533 History of Literary Criticism 3(3-0)
Review of critical attitudes and approaches of enduring significance. Prerequisite: 6 hours of literature.

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 Chaucer 3(3-0)
Middle English grammar and pronunciation. The Life and works of Chaucer with emphasis on the Canterbury Tales and Troilus and Criseyde.

ENG 547 Seminar in Major British Writers 3-9(Spec)
A study of one or more British writers, selected by the instructor. May be repeated for a maximum of nine credit hours. Prerequisites: Graduate status or the following: Grade of "C" or better in ENG 101, ENG 103/099 or ELI 198; Grade of "C" or better in ENG 201; either ENG 134 or ENG 234.

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 134; ENG 349.

ENG 559 Seminar in Major American Writers 3-9(Spec)
A study of one or more American writers selected by the instructor. May be repeated a maximum of nine hours. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 134 or 234. Recommended: 6 hrs of literature courses.

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(Spec)
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 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; either ENG 134 or ENG 234. Recommended: 6-9 hours of ENG 300 and/or ENG 400 level courses.

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 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. Prerequisite: ENG 375.

ENG 573 Linguistics and Reading 3(3-0)
The reading process, the effects of language on reading, the relation between language and writing, and the ways people process information. Prerequisite: ENG 375 or ENG 576.

ENG 574 TESOL Materials, Assessment, Curriculum 3(3-0)
Techniques for designing curricula, teaching materials, and tests and other assessment tools for ESL/EFL or bilingual/bicultural classrooms. Prerequisites: ENG 571; Graduate status or the following: ENG 101 or 103/099 or ELI 196 with a grade of C or better; ENG 201 with a grade of C or better.

ENG 577 Introduction to Second Language Acquisition 3(3-0)

ENG 578 Applied Sociolinguistics 3(3-0)
Topics include cross cultural aspects of conversation, speech act theory, language and gender, non verbal behavior and the role of socio cultural variables in language acquisitions. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 375.

ENG 580 Literature for Young Adults 3(3-0)
Reading interests and library materials of junior and senior high students; methods of stimulating reading. Subject grouping of books related to adolescent reading interests/needs. Identical to LMT 580. Credit may not be earned in more than one of these courses. Prerequisites: Completion of 86 hours; ENG 201 with a grade of C or better, One of: ENG 134 or ENG 234 or ENG 381; or graduate status.

ENG 581 The History of Children's Literature 3(3-0)
Major trends in the history of children's literature as they emerged under certain philosophical, educational, and social influences in England, America, and elsewhere. Emphasis on literary analysis. Prerequisites: ENG 201 with a grade of C or better, One of: ENG 134 or ENG 234 or ENG 381; or graduate status.

ENG 582 Cultural Pluralism in Young Adult and Children's Literature 3(3-0)
An exploration of the literature and heritage of diverse American cultures, primarily through folk literature, fiction, and biography. Prerequisite: Graduate status or the following: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; ENG 134 or 234 or 381.

ENG 583 The Heroic Tradition in Children's Literature 3(3-0)
Study of the hero in epic, myth, folklore, and legend; including modern examples. Prerequisite: Graduate status or the following: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; ENG 134 or ENG 234 or ENG 381.

ENG 601 Graduate Composition 3(3-0)
For graduate students seeking to develop advanced nonfiction writing skills in various academic and non-academic genres. This course may be offered in an online or hybrid format.

ENG 602 Research Materials and Methods 3(3-0)
Instruction in materials and methods for research in language and literature. Prerequisites: Admission to Graduate Program in English.

ENG 603 Seminar in Technical & Professional Communication 3-6(Spec)
Advanced study of the theory and practice of professional and technical communication. May be repeated to a maximum of six hours. This course may be offered in an online or hybrid format. Recommended: ENG 303, 303L, and/or 504 or previous work-related experience with a professional/technical communication focus.

ENG 614 Practicum in Teaching College Composition 3(3-0)
Study and practice of the theories, methods, and materials of teaching first-year college composition. Prerequisites: Open to English teaching assistants.

ENG 615 Problems in Teaching English 3(3-0)
An analysis of the issues, methods, and techniques of teaching English.

ENG 616 The Teaching of Creative Writing 3(Spec)
Theory and practice of teaching creative writing. Prerequisite: Accepted into the MFA program.

ENG 618 Empirical Research Methods in English 3(3-0)
How to design and evaluate empirical research in English; emphasis on the teaching and learning of writing, literature, and English as a second language. Recommended: ENG 601 and/or 602.

ENG 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

ENG 621 Seminar in Contemporary Poetry 3(3-0)
A study of selected contemporary poets in the context of major developments in the poetry of the twentieth century. Recommended: 6 hours of literature at the graduate or undergraduate level.

ENG 622 Seminar in Contemporary Fiction 3(3-0)
Study of significant and influential fiction from 1945 to the present. Prerequisites: Graduate status.

ENG 635 Seminar in English Literature 3-9(Spec)
A study of English literature from one of four historical periods: prior to 1650, from 1650-1800, from 1800-1900, or from 1900 to the present. Prerequisite: Admission to the graduate program. Recommended: Six hours of English Literature. May be repeated to a maximum of 9 hours.

ENG 636 Seminar in Critical Problems 3(3-0)
A study of the major theories and theorists in contemporary literary studies and selected critical problems generated by them. Recommended: 6 hours of literature.

ENG 637 Seminar in Rhetoric and Composition 3-6(Spec)
Theoretical issues, practices, history, texts, applications in Rhetoric and Composition. May be repeated to a maximum of 6 hours.

ENG 638 Seminar in Textual Analysis and Editing 3(3-0)
A course designed to prepare students for editing responsibilities found in a variety of fields, including editing textbooks, consulting with publishers, and preparing manuscripts for printed publication. May be repeated to a maximum of 4 hours.

ENG 656 Seminar in American Literature 3-9(Spec)
The nature of role, frontier, or other factors in American literature of one of the following periods: A. Pre-Romantic Period; B. Romantic Period; C. Realistic and Naturalistic Periods; D. Modern Period. Recommended: 6 hours of American literature. May be repeated to a maximum of 9 hours.

ENG 665 Seminar in World Literature 3-9(Spec)
The tracing of ideas through World Literatures from one of the following periods: A. Classical literature; B. Medieval and Renaissance literature; C. 18th and 19th Century literature; D. Modern literature. Recommended: 6 hours of world literature. May be repeated to a maximum of 9 hours.

ENG 672 Applied Linguistics in Written Communication 3(3-0)
Linguistic approaches to textual analysis and the application of research findings in teaching written standard English.

ENG 673 English Phonology for Language Teachers 3(3-0)
Basic elements of English pronunciation, including segmental phonology, general articulation features, rhythm, and intonation. Involves analysis of pronunciation of native and non-native English speakers. Prerequisite: ENG 375.

ENG 674 English Grammar for Language Teachers 3(3-0)
A functional approach to English grammar, examining the uses of the major grammatical constructions. Includes analysis of language of native and non-native speakers of English. Recommended: ENG 571, ENG 574.

ENG 675 Seminar in English Linguistics 3-9(3-0)
Problems in sociolinguistics, discourse, bilingualism, historical grammar, the applications of modern linguistic theory to teaching a language, and non-native languages. May be repeated to a maximum of nine credit hours. Prerequisites: ENG 375 or equivalent and some foreign language study recommended.

ENG 680 Chippewa River Writing Project Institute 3(3-0)
Writing workshop, composition pedagogy, educational technology, and classroom research. This course may be offered in an online or hybrid format. Prerequisites: Admission by application for the institute as outlined by requirements as outlined by the Chippewa River Writing Project.

ENG 681 Seminar in Children's Literature 3-9(Spec)
Current issues in Children's Literature Studies. This 3 credit course may be taken up to three times.

ENG 690 Practicum in TESOL 1-3(Spec)
An examination and application of methods, materials, and classroom management techniques necessary to teach English effectively to speakers of other languages. May be repeated to a maximum of three times. Prerequisites: Final one-credit unit requires completion of ENG 571 or 577.

ENG 691 Seminar: Writing Fiction 3(3-6)
Workshop in fiction writing. May be repeated up to 6 hours. Prerequisite: Admission to M.A. Creative Writing Concentration.

ENG 692 Seminar in Writing Poetry 3-6(Spec)
Workshop in poetry writing. May be repeated up to 6 hours. Prerequisites: Admission to M.A. Program in English Language and Literature: Creative Writing Concentration.

ENG 693 Seminar in Writing Creative Nonfiction 3-6(Spec)
Workshop in contemporary approaches to writing literary nonfiction. Course may be repeated up to six hours. May be offered in an online or hybrid format.

ENG 694 The Craft of Fiction 3(3-0)
Practice of fiction theories and techniques exemplified by the works of noted authors of short fiction, the novella, and the novel. Prerequisite: Acceptance to any of the English department's MA programs.

ENG 695 The Craft of Poetry 3(3-0)
Poetic techniques, practices, theories, and approaches as exemplified in the works of notable poets and as examined in prosody and poetic forms. Prerequisites: Admission to the English department graduate program in Creative Writing or permission of the instructor.

ENG 696 The Craft of Creative Nonfiction 3(3-0)
Creative Nonfiction techniques, practices, theories, and approaches as exemplified in the works of noted authors and as examined in the genres of creative nonfiction. Prerequisite: Acceptance to any of the English department's MA programs.
ENG 697 Independent Study 3-6(Spec)
Explorations of special problems in language and literature individually agreed upon by student and instructor. May be repeated a maximum of six hours. Prerequisites: Approval by instructor and department chairperson required before registration.

ENG 718 Internship: Teaching 6(Spec)
Supervised teaching experience in community college for pre-service teachers in Master of Arts in Composition and Communication Program. Prerequisites: 21 credit hours of MAECC graduate work, including the following specific courses: ENG 519, 601, 637, and 638; permission of instructor.

ENG 719 Internship: Professional Communication 6(Spec)
Supervised workplace experience in writing, editing and/or similar technical or professional communication activity for students in the Master of Arts in Composition and Communication Program. Prerequisites: 21 credit hours of MAECC graduate work, including: ENG 601, 603, 637, and 638; permission of Internship Advisor.

ENG 799 Thesis 1-6(Spec)
An in-depth, research-oriented study on a topic or a creative work completed in consultation with the thesis advisor as a capstone demonstration of the student's learning. CR/NC only.

Department of Finance and Law (BLR, FIN)
College of Business Administration

Nancy White, Chairperson
332 Sloan, 989-774-3362
Abu S. Amin, Ph.D., Finance
Thomas Anthony, J.D., Law and Public Policy
Bruce Benet, Ph.D., Finance
Vigdis Boasson, Ph.D., Finance
Elizabeth Campbell, J.D., Law and Public Policy
Wan-Jiu Paul Chiou, Ph.D., Finance
Adam Epstein, J.D., Law and Public Policy
James Felton, Ph.D., Finance
Pawan Jain, Ph.D., Finance
John B. Mitchell, D.B.A., Finance
Daniel E. Vetter, Ph.D., Finance
Nancy White, J.D., Law and Public Policy

Master of Business Administration (MBA)
See the College of Business Administration for information.

Course Descriptions: BLR

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; completion of 86 hours; admission to Professional Business Studies or listed on signed major or minor or permission of MBA director or MBE advisor.

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 Professional Business Studies or listed on a signed major or minor or graduate status.

BLR 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: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

BLR 600 Legal and Social Environment of Business 3(3-0)
Basic concepts concerning the interrelationship of business and its external environments. Managerial participation in and response to public policy issues and their resolution. Not available for credit toward the M.B.A. or M.S.A. degree.

BLR 631 Public Policy and Regulated Industries 3(3-0)
Analysis of the procedural and substantive aspects of the regulatory environment which affect the administration of the energy, communications, transportation and similar industries. Prerequisite: admission to M.B.A.
Course Descriptions: FIN
FIN 573 International Finance 3(3-0)
Role of financial manager in international corporations. Environmental problems of foreign exchange. Techniques for making investment decisions, financing marketing operations, long-term capital structure and flow of funds. Prerequisites: FIN 302 or FIN 332; 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.
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 Professional Business Studies or listed on signed major or minor, or permission of MBA director.
FIN 671 Financial Derivatives 3(3-0)
Advanced treatment of futures, options, and swaps. Emphasis is on how to use derivatives to manage risk as well as more advanced derivative pricing models. Prerequisite: MBA 669, admission to MBA, or permission of MBA director.
FIN 674 Short Term Financial Management 3(3-0)
Cash budgeting, working capital management; short and intermediate term financing. Prerequisite: MBA 669, admission to MBA, or permission of MBA director.
FIN 676 Investment Strategy 3(3-0)
Analysis of various theories and techniques available to achieve superior selection and management of securities. Prerequisites: MBA 669, admission to MBA.
FIN 678 Long Term Financial Policies 3(3-0)
Factors involved in formulation of long-term financial policies; corporate goals and objectives and the applications in capital budgeting decisions and financing. Prerequisite: MBA 669, admission to MBA, or permission of MBA director.
FIN 791 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Prerequisite: permission of instructor and department chairperson and 15 hours of graduate credit in MBA program.
FIN 797 Special Topics 3-6(Spec)
Enables students to take various topics under the same number. Specific topic will be listed on the student's transcript. Prerequisites: graduate status and permission of instructor.
FIN 798 Thesis 1-6(Spec)
An approved thesis in finance. Thesis is directed by a committee in conformity with the Regulations and Directions for the Writing of the Master's Thesis. CR/NC only.

Department of Foreign Languages, Literatures, and Cultures
(FLN, FRN, GER, SPN)
College of Humanities and Social & Behavioral Sciences

N. Christine Brookes, Ph.D., Chairperson
305 Pearce Hall, (989) 774-3786
Maria Chouza-Calò, Ph.D., Spanish
Leila Ennaili, Ph.D., French
Carolina Gutiérrez-Rivas, Ph.D., Spanish
Luz Marcela Hurtado, Ph.D., Spanish
Mary-Garland Jackson, Ph.D., Spanish
James Jones, Ph.D., German
Susan Knight, Ph.D., Spanish
Krzysztof Kulawik, Ph.D., Spanish
Roberto Mendoza, Ph.D., Spanish
Amy Ransom, Ph.D., French
Alejandra Rengifo, Ph.D., Spanish
Norma Richardson, Ph.D., Spanish
Daniela Richter, Ph.D., German

Students may earn a Master of Arts in Spanish or they may earn a concentration in French, German, or Spanish in the Master of Arts curricula in secondary education, offered through the Department of Teacher Education and Professional Development. To be admitted to this program, a student must have a background in the specific (relevant) foreign language that includes a minimum of 24 semester hours of course work beyond the 100 level, with an acceptable grade point average in the foreign language of concentration.

Master of Arts (M.A.) in Spanish
Minimum Totals for Graduation: 30 hours
The M.A. in Spanish provides students with a unique program that is designed to enhance fluency in the language, foster interaction with Hispanic cultures, broaden knowledge, and promote professional development. Students in this program will achieve a high level of proficiency in the Spanish language and will become more deeply and personally acquainted with Hispanic cultures. The program has a variety of course options, from mid-week seminars and Saturday classes, to face-to-face and hybrid on-line interaction. Its interdisciplinary and multi-cultural bases will enhance the learning of a wide variety of students, including (but not limited to) teachers of Spanish. The faculty, comprised of experts in linguistics, literature, and cultural studies, strive to provide each student with individual attention. Students will also gain a sense of community and common purpose, especially through participation in the extracurricular activities that are sponsored by the program.

At the end of the program, the student will be able to:
1. work effortlessly in all four communication areas (speaking, listening, reading, and writing) of Hispanic societies;
2. synthesize current political and social happenings, and interpret these syntheses to speakers of the non-Hispanic world;
3. interact with ease at all social levels by identifying the historical differences that distinguish Hispanic societies from other societies;
4. explain to persons from the non-Hispanic world the similarities and distinctions within the different Hispanic societies;
5. understand differences between English and Spanish linguistic aspects such as the sound system, morphemics, and syntax; and
6. analyze literary texts within their cultural context.
Note: When the student begins the M.A., she or he will write an essay (500 words), on a topic chosen by the Spanish faculty, and will engage in a brief oral interview with two members of the Spanish faculty. The purposes of the essay and initial interview are to aid in advising and to establish the student’s entering proficiency level.

**Admission Requirements, Retention & Termination Standards**

<table>
<thead>
<tr>
<th>Admission Requirement Snapshot</th>
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</thead>
<tbody>
<tr>
<td>GPA: 2.7 (and 2.7 in undergrad Spanish courses)</td>
</tr>
<tr>
<td>Entrance Exam: N/A</td>
</tr>
<tr>
<td>Internat’l Application Deadline: July 1 (Fall), Oct. 1 (Spring)</td>
</tr>
<tr>
<td>International Students from Non-TOEFL Exempt Countries: TOEFL 79; IELTS 6.5 (some exceptions may apply)</td>
</tr>
</tbody>
</table>

See Admission Requirement Details Below

In addition to general university requirements for regular admission status, students seeking admission to the master’s program in Spanish must:

1. have completed an undergraduate major in Spanish (or related field) with at least a grade point average of 3.0 in their undergraduate Spanish courses (beyond the 100-level);*
2. have at least a grade point average of 2.7 in their undergraduate coursework;
3. submit letters of reference from three persons who are well acquainted with them and can provide information about their Spanish language skills and prospects for success in this graduate program. The letters are to be sent directly to the Spanish Graduate Coordinator.

Note: Per university policy, conditional admission may be considered for applicants with background or grade point average deficiencies. Courses taken to make up admission deficiencies cannot be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all deficiencies.

**Degree Requirements**

**Required Courses I (27 hours)**

- Students must complete 27 credit hours from the following courses:
  - SPN 585 - Introduction to Hispanic Linguistics 3(3-0)
  - SPN 595 - Theory and Practice of Translation 3(3-0)
  - SPN 610 - Studies in U.S. Latino Cultures 3-6(3-0)
  - SPN 615 - Themes in Latin American Cultural Studies 3-9(Spec)
  - 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 660 - Spanish Phonology 3(3-0)
  - SPN 665 - Second Language Acquisition: Theory and Practice 3(3-0)

Note: The following courses may be taken more than once if the same content is not repeated: SPN 610, 615, 620, and 630.

**Required Course II (3 hours)**

To assess the student’s knowledge in the subject areas studied, the student must pass a written comprehensive examination that is based on a reading list provided by the faculty.

- SPN 697 - Independent Study 1-3(Spec)

**Other Requirement**

**Oral Interview**

To assess the student’s oral proficiency in Spanish upon completion of the program, the student must pass an oral interview with a committee of graduate faculty in Spanish at CMU. This oral interview will assess:

1. the student’s ability to converse, describe, evaluate, synthesize, and state opinions;
2. the student’s accent and pronunciation;
3. the scope of the student’s active vocabulary;
4. the student’s mastery of grammar.

**Total: 30 semester hours**

**Accelerated M.A. in Spanish**

**Eligibility Standards:**

- Students who meet the following criteria are eligible to apply to the accelerated program:
  1. Signed major in Spanish.
  2. Enrolled in the semester in which the student expects to have completed at least 86 credits.
  3. Completed at least one SPN 400-level class and the undergraduate study abroad requirement.

**Admission Requirements:**

- Students must apply for admission to Graduate Studies during the semester in which the student expects to have completed at least 86 credits. Students must meet the requirements for admission to the Master of Arts in Spanish degree program and to Graduate Studies. In addition, students should also have completed university competency requirements. If admitted, graduate status is conferred in the senior year after the student has completed at least 86 undergraduate credit hours with a cumulative undergraduate grade point average of at least 3.25 and a grade point average of 3.25 in Spanish course work.

**Program Requirements:**

- Three to twelve (3-12) hours of graduate SPN credit (500 and 600 level courses) leading to an MA degree in SPN may be taken in the final year of undergraduate work. These courses will count toward both undergraduate and graduate degrees.

**Course Descriptions: FLN**

- **FLN 597 Special Topics 1-8(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.

**Course Descriptions: FRN**

- **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. Recommended: FRN 315 or 316.
- **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.

**Course Descriptions: GER**

- **GER 570 Advanced Grammar and Composition 3(3-0)**
  - Analysis of grammatical structures, vocabulary expansion, and extensive practice in written expression. May be offered as Writing Intensive. Prerequisite: GER 312.
- **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.
Course Descriptions: SPN

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 585 Introduction to Hispanic Linguistics 3(3-0)
Seminar on the major aspects of Hispanic Linguistics such as sound patterns, word-formation, sentence structure, meaning and context, discourse structure, regional and social variation. Prerequisite: One 400-level SPN course; or graduate standing in the M.A. Spanish Program.

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; or graduate standing in M.A. Spanish Program.

SPN 595 Theory and Practice of Translation 3(3-0)
The link between linguistic and cultural factors and their relationship to translation will be emphasized. This course may be offered in an online or hybrid format. Prerequisites: SPN 375; one SPN 400 level course; or graduate standing in M.A. Spanish Program.

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.

SPN 610 Studies in U.S. Latino Cultures 3-6(3-0)
Analysis of Latino culture in the United States in terms of a given topic/genre. The works selected for each topic/genre will be examined in the light of their historical, social, and economic context. This course is approved for offering in a distance learning format. Prerequisites: admission to the M.A. program in Spanish. A student may take this course twice, for 3 hours of credit each time, but must choose a different topic/genre for the second 3 hours.

SPN 615 Themes in Latin American Cultural Studies 3-9(Spec)
Analysis of Latin American societies through concepts of nation, ethnicity, social class, and gender. Topics may include cultural production, urban politics, and socioeconomic development. A student may take this course up to three times, for 3 credits each time, when content previously studied is not duplicated. This course may be offered in an online or hybrid format. Prerequisite: Admission to the M.A. program in Spanish.

SPN 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

SPN 620 Special Topics in Spanish-American Literature 3-9(Spec)
Examination of literature and culture in Spanish America through analysis of literary and cultural texts. May be taken up to three times when themes are different. May be offered in an online or hybrid format. Prerequisite: Admission to the M.A. program in Spanish.

SPN 621 Colonial to 19th-Century Spanish American Literature 3(3-0)
Special topics seminar on Spanish-American literature from the 16th-19th centuries through analysis of representative texts and other media, with an overview of the historical context. This course may be offered in an online or hybrid format. Prerequisites: Admission to the M.A. program in Spanish.

SPN 622 20th and 21st-Century Spanish American Literature 3(3-0)
Analysis of Spanish American literary texts and their relationship with the changing social landscape of the 20th and 21st century. May be offered in an online or hybrid format. Prerequisite: Admission to the M.A. program in Spanish.

SPN 623 Critical Thinking through Hispanic Literature 3(3-0)
This course offers instruction in analytical and argumentative writing, critical thinking, research strategies and proper documentation through the study of Hispanic literary works. This course may be offered in an online or hybrid format. Prerequisites: Admission to the M.A. program in Spanish.

SPN 630 Themes in Spanish Peninsular Literature and Cultures 3-9(Spec)
Special topics seminar on main themes, authors and genres of prose, drama and lyric production in Spain from the medieval period to the 21st century. May be taken up to three times if the themes are different. May be offered in an online or hybrid format. Prerequisite: Admission to the M.A. program in Spanish.

SPN 631 Medieval and Golden Age Spanish Literature 3(3-0)
Special topics seminar on main themes, authors and genres of prose, drama and lyric production in Spain from the medieval period to the 17th century. This course may be offered in an online or hybrid format. Prerequisite: Admission to the M.A. program in Spanish.

SPN 632 Eighteenth to Twenty-first Century Spanish Literature 3(3-0)
Special topics seminar on literature that reflects significant factors which shape Spanish society and culture from the eighteenth century to the present day. This course may be offered in an online or hybrid format. Prerequisite: Admission to the M.A. program in Spanish.

SPN 640 History of the Spanish Language 3(3-0)
Examines the external and internal history of the Spanish language from its Indo-European origins to the modern period, with special emphasis on the evolution of phonology, morpho-syntax, lexis, and semantics. Prerequisite: admission to the M.A. program in Spanish.

SPN 650 Stylistics 3(3-0)
This course is designed to enable the student to deal with complexities of written Spanish at different levels of the language giving consideration to the fundamental aspects of morpho-syntax or orthography. This course may be offered in a hybrid format. Prerequisite: admission to the M.A. program in Spanish.

SPN 655 Spanish Pragmatics and Critical Discourse Analysis 3(3-0)
The seminar offers theoretical frameworks and current issues in pragmatics and critical discourse analysis. It demonstrates the relevance and usefulness of both disciplines to the field of applied linguistics. This course may be offered in an online or hybrid format. Prerequisite: Admission to the M.A. program in Spanish.

SPN 660 Spanish Phonology 3(3-0)
This course is designed to provide an understanding of Spanish articulatory phonetics in itself, and as contrasting with English articulatory phonetics, and to analyze the phonological system of the Spanish language. Prerequisite: admission to the M.A. program in Spanish.

SPN 665 Second Language Acquisition: Theory and Practice 3(3-0)
The study of second language acquisition and pedagogy, with focus on communicative language teaching and practical application in teaching Spanish at the university level. Prerequisite: Permission of the instructor.

SPN 670 Study Abroad: Latin America 3-6(Spec)
Courses offered at a site in Latin America selected by the department. Students will take one course in Spanish American Cultural Issues and one in Language or Linguistics, as approved by the advisor. Prerequisite: admission to the M.A. program in Spanish.

SPN 680 Study Abroad: Spain 3-6(Spec)
Courses offered at a site in Spain selected by the department. Students will take one course in Spanish Culture and one in Language or Linguistics, as approved by the advisor. Prerequisite: admission to the M.A. program in Spanish.

SPN 697 Individual Study for the Comprehensive Examination 3(3-0)
Individual study for the Comprehensive Examination under the supervision of three Spanish graduate faculty. Prerequisite: Permission of Spanish Graduate Director.

Courses offered at a site in Spain selected by the department. Students will take one course in Spanish Culture and one in Language or Linguistics, as approved by the advisor. Prerequisite: admission to the M.A. program in Spanish.

Courses offered at a site in Latin America selected by the department. Students will take one course in Spanish American Cultural Issues and one in Language or Linguistics, as approved by the advisor. Prerequisite: admission to the M.A. program in Spanish.
Department of Geography (ESC, GEO)  
College of Science and Technology

David Patton, Chairperson  
296B Dow Science  
(989) 774-2798  
https://www.cmich.edu/academics/sci_tech/Geography

Brian Becker, Ph.D., Director, M.S.GISci Program, Remote Sensing,  
989-774-1529

Benjamin Heumann, Ph.D., Director, Center for Geographic Information Science  

Bin Li, Ph.D., Geographic Information Systems  

David Patton, Ph.D., Cartography and GIS  

Yong Tian, Ph.D., Geo-computation and Environmental Modeling  

Xiaoguang Wang, Ph.D., Land-use and Transportation Planning  

Tao Zheng, Ph.D., Remote Sensing

Master of Science (M.S.) Degree in Geographic Information Sciences (GISci)

Minimum Totals for Graduation: 33 hours

The M.S. program in Geographic Information Sciences (GISci) provides advanced course work and applied research in cartography, geographic information systems (GIS) and remote sensing. Each student will complete a thesis or research project that applies GISci techniques to economic, environmental, or other issues that require spatial data processing and analysis. Graduates will develop skills that will qualify them for a variety of spatial data processing positions that make up a rapidly growing field in the information technology industry.

The M.S. in GISci is a 33 credit hour program available either through a Plan A option (thesis) or Plan B option (non-thesis). Under Plan A, six credits of thesis work (GEO 797) is required. Under Plan B, three credits of a directed research project (GEO 797) is required. The thesis or research project must apply GISci techniques to economic, environmental or other problems that require spatial data analysis. More detailed information is available in the department office.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

ADMISSION REQUIREMENT SNAPSHOT

GPA: 3.0 (and 3.0 in major)  
Entrance Exam: GRE  
Graduate School Application Deadline: July 1 (Fall), Oct. 1 (Spring)  
See Admission Requirement Details Below

All applicants must submit scores for the general GRE. To receive full consideration for financial support beginning in a fall semester, all application materials must be received in the Department of Geography no later than March 1. Applicants should allow approximately one month for materials submitted to the Office of Research and Graduate Studies to be processed and forwarded to the department. Details regarding the application process and the program may be found at http://www.cmich.edu/academics/sci_tech/Geography.

Students entering the M.S. GISci program are required to have a sound knowledge of the fundamental concepts of cartography, GIS, and remote sensing. It is also expected that M.S. GISci students have a basic knowledge of a computer language, calculus, and statistics as these are skills necessary to understand, manipulate, and develop the analytical methods and algorithms that are the foundations of advance training in Geographic Information Science. A minimum 3.0 GPA in the student’s undergraduate major is required.

Computer Programming

One course in a current programming language (CMU equivalent: CPS 110 or CPS 180) with minimum grade of B.

Mathematics and Statistics

One course in Calculus (CMU equivalent: MTH 132) and one course in Statistics (CMU equivalent: STA 282 or STA 382).

Fundamental Courses in Geographic Information Sciences

Option 1.

At least, one course in Cartography (CMU equivalent: GEO 203), one course in Introductory Geographic Information Systems (CMU equivalent: GEO 303), and one course in Introductory Remote Sensing (CMU equivalent: GEO 305). Minimum grade of B in each.

Option 2.

Students who have not completed all of the undergraduate GISci courses listed in Option 1 may fulfill this entrance requirement by completing GEO 501. Students who have completed all of the undergraduate GISci courses from Option 1 may not earn credit in GEO 501.

Degree Requirements

Required Courses I (15 hours)

GEO 500 - Advanced Cartography 3(2-2)
GEO 503 - Advanced Geographic Information Systems 3(2-2)
GEO 508 - Digital Remote Sensing 3(2-2)
GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)
GEO 615 - Research Design in Geographic Information Sciences 3(3-0)

Note: A student satisfying any of the required courses or their equivalents prior to entering the program may be excused from these courses. Other courses will be substituted with the approval of the advisor. Credits from these courses will be applied to the 21 hours of required courses. A student must receive a minimum grade of C in each course to have their course work approved for the graduate program.

Required Courses II (6 hours)

Select two courses from the following:

GEO 600 - Dynamic Mapping and Visualization 3(2-2)
GEO 603 - GIS Design and Programming 3(2-2)
GEO 608 - Advanced Digital Remote Sensing 3(2-2)
GEO 701 - Contemporary Spatial Data Management 3(2-2)

Note: A student satisfying any of the required courses or their equivalents prior to entering the program may be excused from these courses. Other courses will be substituted with the approval of the advisor. Credits from these courses will be applied to the 21 hours of required courses. A student must receive a minimum grade of C in each course to have their course work approved for the graduate program.

Additional Requirement (3-6 hours)

Select either Plan A (Thesis) or Plan B (Directed Research)

Plan A Thesis (6 hours)

GEO 798 - Thesis 1-6 (Spec)

Plan B Directed Research (3 hours)

GEO 797 - Directed Research in Geographic Information Sciences 1-6 (Spec)

Electives (6-9 hours)

Two or three 500 to 700 level courses in a technical or cognate field(s) in consultation with advisor.

Technical courses might include relevant Computer Science, Mathematics, and/or Statistics courses or Special Topics courses in Cartography, Geographic Information Systems, Global Positioning System (GPS), or Remote Sensing. Cognate courses might include relevant Biology, Earth Science, Geography, Geology, Political Science, or other courses that would complement the student’s area of specialization. A student must receive a minimum grade of C in each elective course.

Total: 33 semester hours

ACCELERATED PROGRAM

Undergraduate students in Geography with a Concentration in Geographic Information Science can pursue a Master of Science degree in Geographic Information Science while still fulfilling the requirements for their Bachelor’s degree. The Accelerated Master’s Degree Program (AMDP) allows students to reduce the total number of credits to complete their undergraduate and graduate level degrees by applying up to 12 credits (500 and 600 level courses) towards graduate requirements on both degree programs.
ADMISSION CRITERIA:

Students must have an overall undergraduate grade point average (GPA) of at least 3.25 and have completed a minimum of 86 credits towards a Bachelor’s degree, including all University Program requirements (including transfer and/or AP credits) the semester that they apply for admission to the Accelerated MS program in Geographic Information Science. Students must also satisfy all other requirements for regular admission to the MS program in Geographic Information Science to be eligible for the accelerated program including the completion of GEO 203, 303 and 305, MTH 130, STA 382 and CPS 110 or 180.

During the fourth year, students will complete 12 credits of course work that will be counted towards both the undergraduate and graduate degrees. The student is responsible for fulfilling all of the requirements of the undergraduate degree and, therefore, additional credits may need to be taken to complete the Bachelor of Science degree requirements during the fourth year.

A sample curriculum for a student who has completed 94 credit hours of undergraduate course work is given below:

Year Four:

Fall
- GEO 500 (3)
- GEO 503 (3)
- Undergraduate courses (9)
Total: 15 credits

Spring
- GEO 508 (3)
- GEO 512 (3)
- Undergraduate courses (9)
Total: 15 credits

Year Five:

Fall
- GEO 600, 603, or 608 (3)
- GEO 701 (3)
- Graduate Electives (6)
Total: 12 credits

Spring
- GEO 600, 603 or 608 (3)
- GEO 798 (Plan A) or 797 (Plan B) (6)
Total: 9 credits

Graduate Certificate in Data Mining

This is an interdepartmental graduate certificate. Please check the index for the page number.

Ph.D. in Earth and Ecosystem Science

This degree is an interdisciplinary program. Please see the index for the page number.

Master of Arts (M.A.) or Graduate Certificate in Cultural Resource Management

These programs are interdisciplinary. Please see the index for the page number.

Course Descriptions: GEO

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. Prerequisites: GEO 303.

GEO 501 Principles and Applications of Geographic Information System 3(2-2)
Fundamentals of GIS and its applications in environmental, social and economic analysis (for non-geography majors only). This course is approved for offering in a distance learning format. Prerequisites: GEO 203 or senior standing or graduate standing.

GEO 503 Advanced Geographic Information Systems 3(2-2)
Use of raster spatial data models and associated methods for the collection, processing, management, analysis and visualization of geographic data. Focus: land use/environmental applications. Prerequisites: GEO 303, 305; or GEO 501.

GEO 508 Digital Remote Sensing 3(2-2)
Computer processing and data analysis of digital remote sensing data. Emphasis on multispectral image processing and analysis using standard image processing software. Prerequisites: GEO 303, 305. Recommended: STA 382.

GEO 511 International Geographic Experience 3-6(Spec)
Experience in field research techniques and knowledge of regions outside the United States. International travel is required. May be repeated one time only. Prerequisites: 6 semester hours of 300 level or higher Geography course.

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.

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. Co-requisites: GEO 303.

GEO 515 Geography of the Great Lakes Region 3(3-0)
Topics include shoreline development, resource use, economic development strategies, social issues, and land use change through contemporary and historical perspectives in the Great Lakes region. Prerequisites: GEO 105 or GEO 120; GEO 350 or GEO 395.

GEO 516 Advanced Remote Sensing Systems 3(2-2)
Characteristics, processing, and applications based on advanced remote sensing systems including imaging radar, thermal and hyperspectral systems. Prerequisites: GEO 508 and STA 382.

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 530 Land Use Planning 3(3-0)
Study of land use planning history, concepts and techniques. Analysis of federal, state, and local government roles in planning. Examination of specific land use programs. Prerequisites: GEO 303; 6 additional semester hours in either or both GEO or PSC.

GEO 531 Integrated Land Use Planning 3(3-0)
This course provides students comprehensive understanding of land use issues, processes and solutions. The course integrates innovative planning concepts with advanced analytic tools. May be offered as Writing Intensive. Prerequisite: GEO 530.

GEO 550 Geography for Teachers 3(3-0)
For teachers who want to upgrade their knowledge of geography, experiment with new teaching techniques, and learn how to make professional in-service presentations to teachers. Graduate credit only. Prerequisites: Three years teaching experience and/or permission of instructor.

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)
Various special topics offered at an advanced undergraduate and graduate level. Prerequisites: permission of instructor.

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. Identical to ESC 591. Credit may not be earned in more than one of these courses. 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)
Exploration of topics in geography agreed upon by student and instructor. Course may be taken for credit more than once, not to exceed nine hours. Prerequisites: At least 6 hours of Geography credit at the 400 level or above, permission of instructor.

GEO 600 Dynamic Mapping and Visualization 3(2-2)
Study of the theory and application of advanced methods of cartographic display using dynamic mapping and visualization methods. Prerequisites: GEO 500.

GEO 603 GIS Design and Programming 3(2-2)
Design and implementation of GIS applications using component software and high level macro languages. Prerequisites: GEO 503 or admission to the MS GIS program.

GEO 608 Advanced Digital Remote Sensing 3(2-2)
Advanced image processing and data analysis techniques using contemporary operational and experimental remote sensing systems. Overview of satellite instrumentation and sensor operations. Prerequisites: GEO 508; STA 382.

GEO 615 Research Design in Geographic Information Sciences 3(3-0)
Formulating research questions, reviewing literature, designing research methodology, and communicating research results in Geographic Information Sciences. Prerequisites: Two of the following: GEO 500, 503, 508, 512.
School of Health Sciences  
(DHA, HSC, HSL, MPH, MHA)  
*The Herbert H. and Grace A. Dow College of Health Professions*

**Jeffery Betts, Chair**  
2219 Health Professions Building, (989)774-6529

**Steven Berkshire**, Ed.D., Division Director, Health Administration, and Program Director, DHA Program  
**Jeffery Betts**, Ph.D., Exercise & Health Sciences  
**Jodi Brookins-Fisher**, Ph.D., Division Director, Community Health  
**Mark Cwiek**, J.D., Health Administration  
**Nailya DeLellis**, MPH, Ph.D., Health Administration  
**Jeffrey E. Edwards**, Ph.D., Graduate Coordinator and Division Director of Exercise and Health Sciences  
**Salma Haidar**, Ph.D., Community Health  
**Roger Hammer**, Ph.D., Exercise & Health Sciences  
**Lana Ivanitskaya**, Ph.D., Health Administration  
**Roop Jayaraman**, Ph.D., Exercise & Health Sciences  
**James Johnson**, Ph.D., Health Administration  
**Bernard Kerr**, Ed.D., Health Administration  
**Karen Lomond**, Ph.D., Exercise & Health Sciences  
**Mark Minelli**, Ph.D., Community Health  
**Rachael Nelson**, Ph.D., Exercise & Health Sciences  
**Stephen Nkansah-Amankra**, Ph.D., Community Health  
**Paul O’Connor**, Ph.D., Exercise & Health Sciences  
**William Saltarelli**, Ph.D., Exercise & Health Sciences  
**Naveen Sharma**, Ph.D., Exercise & Health Sciences  
**Micah Zuhl**, Ph.D., Exercise & Health Sciences

**Mary Lou Bruce 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 Mount Pleasant community, for a junior, senior or graduate student majoring in health education and health science who has earned a 3.0 or higher GPA.

**Master of Arts (M.A.) in Exercise Physiology**

**Minimum Totals for Graduation: 30 hours**

Students pursuing this degree must complete a minimum of 30 credit hours.

This option includes a required core of courses, specialization courses, and elective and cognate courses. The student must complete a required core. Credit hours in the core vary depending on whether a thesis (6 credits) or independent study (3 credits) is selected.

This degree is designed to prepare students to be exercise physiologists. The study of the physiology of work and exercise is the main emphasis of this program.

**Admission Requirements, Retention & Termination Standards**

<table>
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<tr>
<th>Admission Requirement Snapshot</th>
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<td>GPA: 3.0</td>
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**Application Deadlines:**  
Apr. 1 (Fall), Aug. 1 (Spring), Feb. 1 (Summer)

See Admission Requirement Details Below
To be considered for admission to the Master of Arts in Exercise Physiology degree program, a student must meet the general requirements for admission to the CMU Graduate Studies.

Based upon the undergraduate GPA, resume, and professional experience, the candidate may be accepted as a regular or conditional student. For regular admission, the minimum undergraduate GPA must be 3.0 or higher on a 4.0 scale.

To be admitted to this program, the student must present 20 or more hours of exercise science, physical education, or health-related courses.

To be assured consideration for admittance, all application materials must be received by the following deadlines: April 1 for fall semester, August 1 for spring semester, and February 1 for summer sessions.

**Required Courses I (13 hours)**
- BIO 590 - Cardiovascular Physiology 3(3-0)
- HSC 631/ PES 631 - Physiology of Exercise 4(3-2)
- HSC 670/ PES 670 - Research Methods for Health, Physical Education and Sport, Health and 3(3-0)
- PES 606 - Motor Learning and Human Performance 3(3-0)

**Required Courses II (3 hours)**
Select one of the following:
- HSC 544 - Biostatistics 3(2-1)
- PES 672 - Statistics for Physical Education and Sport, Health and Recreation 3(3-0)

**Required Courses III (3-6 hours)**
- PES 691 - Independent Study 3(Spec)
- PES 698 - Thesis 1-6(Spec)

**Electives (8-11 hours)**
Select hours in consultation with an advisor.

**Total: 30 semester hours**

**Additional Requirements:**
1. An oral examination in the field of specialization may be given at the discretion of the department. The department reserves the right to administer a comprehensive examination after the completion of approximately 20 hours of course work as a tool to secure information to be used in counseling the student toward the completion of the selected program.
2. Students must consult with an advisor prior to taking a 500-level course.
3. Students must present 15 or more semester hours of classes at or above 600-level for this degree.
4. A maximum of six hours of credit in practicum, field study, and internship courses may be applied toward the completion of this degree program.

**Master of Public Health (MPH)**

**Minimum Totals for Graduation: 47 hours**

Public Health is organized efforts in a community to improve the health of its population. It applies systematic and analytic reasoning to evaluate the etiologies of disease and illness causation within a population. The MPH is recognized as the flagship degree in public health. The program at CMU is designed for students with a Bachelor's degree and for working professionals who already have a Bachelor's degree and wish to have a graduate degree. The program explores challenges and problems affecting the population's health, particularly the health of rural and underserved groups, by focusing on areas of study such as epidemiology, environmental health, rural health, public health leadership, program planning, evaluation and health policy and management. Students build competencies in understanding the major social, behavioral, cultural, political, environmental, and regulatory factors affecting the health of populations. This understanding enables students to apply specific new and innovative techniques to address the health challenges of rural and underserved populations across the state, country and globally.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

**Note:** This new program will accept admissions for Fall, 2016.

<table>
<thead>
<tr>
<th>ADMISSION REQUIREMENT SNAPSHOT</th>
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<tr>
<td>GPA: 3.0</td>
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<tr>
<td>International Deadline: July 1 (Fall) , Oct. 1 (Spring)</td>
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<tr>
<td>See Admission Requirement Details Below</td>
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</tbody>
</table>

The MPH courses are sequenced to start in each fall semester of the academic calendar. Students must provide official documents including official transcripts of classes completed, and a GRE, GMAT, MCAT, or other standardized graduate-level test score as key requirements for admission to the graduate program. These documents are to be reviewed by faculty of the program and a professional admissions counselor and evaluated according to the standards of minimum acceptability to graduate schools in the country.

Students admitted in the spring program should take courses that might not have stringent prerequisites or with the permission of the instructor (such as MPH 640 - Biostatistics or MPH 650 - Biological Basis of Public Health), or other elective classes. In the initial stages, students admitted in the spring semester of the program may be delayed for at least one semester of the expected completion date; this will be offset when classes are taught in each semester. Students may take summer class electives which could count toward requirements for graduation.

Students desiring research will have the option to write a thesis and defend at a forum, at a time determined in consultation with the student’s committee; for all other students, a capstone course is required.

<table>
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<tr>
<th>Core Courses (26 hours)</th>
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<tr>
<td>MPH 640 - Biostatistics 4(3-1)</td>
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<tr>
<td>MPH 642 - Health Education Theories 3(3-0)</td>
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<tr>
<td>MPH 644 - Rural Health 3(3-0)</td>
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<tr>
<td>MPH 646 - Epidemiology 4(3-1)</td>
</tr>
<tr>
<td>MPH 648 - Health Policy and Management 3(3-0)</td>
</tr>
<tr>
<td>MPH 650 - Biological Basis of Public Health 3(3-0)</td>
</tr>
<tr>
<td>MPH 652 - Public Health Environmental Science 3(3-0)</td>
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<tr>
<td>MPH 654 - Public Health Leadership 3(3-0)</td>
</tr>
</tbody>
</table>

**Required Courses (15 hours)**

| MPH 658 - Health Planning and Assessment 3(3-0) |
| MPH 660 - Program Evaluation 3(3-0) |
| MPH 664 - Public Health Communication and Informatics 3(3-0) |
| MPH 796 - MPH Capstone Project 1-6(Spec) |
| MPH 798 - Thesis 1-6(Spec) |

**Note:** Choose only one of MPH 796 or 798, not both.

**Electives (6 hours)**
Select two of the following:

| MPH 666 - Substance Abuse Services 3(3-0) |
| MPH 668 - Ethics in Public Health 3(3-0) |
| MPH 670 - Methods in Public Health Research 3(3-0) |

**Total: 47 semester hours**

**Doctoral Program in Health Administration (D.H.A.)**

**Minimum Totals for Graduation: 63 hours**

Applications are accepted for admission to the Doctor of Health Administration (DHA) program for the fall cohort start. Applications must be received for the fall start by April 1. Inquire with the DHA secretary at 989-774-1351 or the DHA program director at 989-774-1640.

The program leading to the Doctor of Health Administration degree is designed to provide advanced academic, relevant, and professionally-oriented education. The DHA degree is not for individuals wishing to gain a degree to enter a field; rather, it is designed for professionals already in the field. The curricular and learning outcome objectives of this applied doctorate program...
are directed toward preparing individuals with the theoretical foundations, applied skills and practical expertise required for leadership positions within the healthcare industry. Emphasis will be given to imparting and advancing skills that foster life-long learning, systematic investigation and testing of practices and operational models via data/evidence-based strategies, and the public dissemination, and reporting of new findings within the field. The intent of the program is to provide advanced knowledge, skills, and abilities to practicing health professionals in a convenient, yet rigorous academic environment.

The program course of study is delivered in a sequenced manner of fifteen internet-based courses, six intensive face-to-face two and a half-day seminars, a general comprehensive examination, and an applied research dissertation. Students matriculating into this program cannot be granted prior experience credit toward semester credit hour degree requirements. Students matriculating into the DHA program may, with the approval of the program, transfer up to six (6) credits of course work taken in another regionally accredited doctoral program. The applicant must request the transfer and identify which courses he/she wishes to transfer. The DHA Program will review the request and make a determination as to the relevancy of the courses to the program, whether the courses are equivalent to any of the DHA courses, and whether the request will be granted. No transfer credits will be accepted to meet the dissertation requirement nor DHA 714 or DHA 726. The applicant must have earned at least a B grade on any course being requested to transfer. The applicant needs to submit a transcript showing the courses, a course description and the syllabus for the course. A new group of students will begin studies each year. Each student will be assigned an advisor for the didactic portion of the program. Using a modular format, fifteen courses and six intensive seminars during the first two years of the program comprise the didactic portion of the program. The successful completion of a comprehensive examination at the end of the didactic portion of the program will transition the student to doctoral candidate status where the doctoral candidate will begin their dissertation preparation, proposal, implementation, defense to their doctoral committee, and reporting. During the dissertation phase, each student will work closely with a dissertation advisor/major professor. The didactic portion of the program carries fifty-one (51) semester credit hours and the dissertation portion carries twelve (12) semester credit hours for a total of sixty-three (63) semester credit hours for the entire program. Students will choose between a three (3) year or five (5) year degree plan. Students choosing the three year option will enroll in two (2) courses per term and generally will complete the program in three years while those choosing the five-year option will normally enroll in one (1) course per term.

### Required Courses I (24 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHA 700</td>
<td>Leadership Strategies for Healthcare Policy and Organizations</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 702</td>
<td>Probability and Statistics for the Health Professions</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 704</td>
<td>Population Health</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 705</td>
<td>Seminar in Public Health</td>
<td>1(1-0)</td>
</tr>
<tr>
<td>DHA 706</td>
<td>Quantitative Analysis in Health Organization</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 708</td>
<td>Organizational Theory and Behavior for the Health Professions</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 709</td>
<td>Seminar in Health Dynamics: Current Issues, Trends and Change</td>
<td>1(1-0)</td>
</tr>
<tr>
<td>DHA 710</td>
<td>Qualitative Analysis in Healthcare</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 712</td>
<td>Research Methods and Practice for the Health Professions</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 713</td>
<td>Seminar in Health Services Research</td>
<td>1(1-0)</td>
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### Required Courses II (27 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHA 714</td>
<td>Health Systems Thinking and Practice</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 716</td>
<td>Communication in Health Organizations</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 717</td>
<td>Seminar in Healthcare Dynamics: Stakeholder Relations</td>
<td>1(1-0)</td>
</tr>
<tr>
<td>DHA 718</td>
<td>Healthcare Law, Regulations and Ethics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 720</td>
<td>Health Economics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 721</td>
<td>Seminar in Healthcare Policy and Politics</td>
<td>1(1-0)</td>
</tr>
<tr>
<td>DHA 722</td>
<td>Health Informatics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 724</td>
<td>Fiscal Responsibility and Accountability for Health Entities</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 725</td>
<td>Seminar in Strategic Planning for Health Organizations</td>
<td>1(1-0)</td>
</tr>
<tr>
<td>DHA 726</td>
<td>Applied Leadership</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>DHA 728</td>
<td>Comparative Health Systems</td>
<td>3(3-0)</td>
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</tbody>
</table>

### Required Courses III (12 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHA 898</td>
<td>Dissertation</td>
<td>1-12(Spec)</td>
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</tbody>
</table>

**Total: 63 semester hours**

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**Admission Requirements, Retention & Termination Standards**

**Admission Requirement Snapshot**

- **Application Deadline:** April 1 (Fall)
- **TOEFL or ECFMG accepted for English Proficiency**
- **See Admission Requirement Details Below**

The minimum requirements and standards for applicant admission to the program include the following criteria:

- An earned regionally accredited master’s degree in an appropriate area of study (e.g., health administration, business administration, nursing management, public health, public administration) or a professional degree (e.g., M.D., D.O., D.D.S.). Other areas of graduate study at the master’s degree level will be considered by petition to the faculty. GPA will be considered in the admissions process;
- Satisfactory completion of graduate coursework or equivalent must be provided as evidence by student applicants in the areas of health economics or economics, finance, statistics, administration/management, and organizational development/behavior.
- Demonstration of at least five years of work related experience at mid-level or higher health management, administration, clinical administration, or in health policy;
- Oral and written English language proficiency. Applicants whose native language is not English will be required to submit the results of the Test of English as a Foreign Language (TOEFL) scores or another test of English equivalency (such as the ECFMG for physicians who were foreign medical students). This requirement may be waived if prior academic experience and success in other United States colleges/universities or employment settings can be satisfactorily demonstrated;
- Submission of a career goal statement and a current curriculum vitae or resume;
- Submission of a research paper based on a premise that the DHA Program Office will provide to applicants. The instructions for how to prepare the paper will be provided at time of application inquiry.
- At least three (3) letters of recommendation from professional colleagues that speak to the applicant’s potential to do doctoral work, transcripts and other documentation customarily required for admission to the Graduate Studies will be required.
- Successful completion of an admission interview with the program faculty.
- Students admitted to the Program must attend the on-campus new DHA student orientation. If an admitted applicant cannot attend the orientation, he/she will need to defer to the next year.
Graduate Certificate in Health Systems Leadership

Minimum Totals for Graduation: 18 hours

The Graduate Certificate in Health Systems Leadership is designed for graduate level students who want to gain education in healthcare administration and management, but do not necessarily want or need a master’s degree because they already possess a graduate degree in another field or they are already practicing in a healthcare profession. The certificate is designed to provide academic knowledge and training in healthcare administration and operations with a compliance focus. The six courses in the certificate are similar to the core healthcare administration curriculum and content one would obtain in a master’s degree in the field. It is anticipated that a student can earn the certificate in conjunction with another degree program and in some cases include the six courses as a concentration in a distinct degree program. This option is dependent on the other degree program and its requirements. For example, a student earning the MD degree might complete the certificate while completing the requirements for the medical degree. Interested students should discuss such options with an academic advisor or their academic program director. Course work includes content in healthcare law, compliance, operations, administration, health economics, policy, marketing, planning, and healthcare finance. Students can find employment in a variety of healthcare settings in administrative or management positions. Potential students interested in the graduate certificate should speak with a faculty member in the Health Administration Division of the School of Health Sciences or an admissions representative from CMU Global Campus. Students enrolling in the graduate certificate must be admitted to the University as a graduate student and be in good academic standing with the Office of Research and Graduate Studies. The certificate may be taken either online or in the classroom where offered by the University or in combination between classroom and online.

Admission Requirements, Retention & Termination Standards

To be admitted to the Graduate Certificate, a student must have an earned undergraduate degree from a regionally accredited university in the United States or an equivalent degree if from a non-U.S. college or university. The student must have an undergraduate cumulative GPA of at least a 2.7, with a 3.00 being optimal. Prerequisite course work in accounting, economics, statistics, and English composition must have at least a 2.00 Grade Point (C or above). Central Michigan University equivalent courses would be ACC 201, 202, or 250; ECO 201, 202, or 203; STA 282 or PSY 211; and ENG 101 and 201. International students must meet the language requirements of the Office of Research and Graduate Studies.

Students must complete an application for admission as a graduate student at the University and meet the admission requirements for graduate status. There is no requirement for a GMAT, GRE or similar entrance examination; however, if a student wishes to submit scores from these examinations they can be considered in the application process. Admission and enrollment in the program can occur at the beginning of any term. Students must also submit official transcripts from any degree program attempted or completed and three letters of reference from people who can comment on the applicant’s ability to do graduate level work.

Students must maintain a 3.00 cumulative GPA to graduate with the certificate. Courses where a grade of C- or lower is earned do not count for graduation and must be repeated for a satisfactory grade. Students who do not maintain a 3.00 cumulative GPA may be considered for academic probation or suspension from the certificate. A student cannot have more than two courses with a C or C+ grade for graduation.

Transfer credits: A maximum of 6 semester hours may be transferred into the certificate from another graduate degree program from a regionally accredited university or college, providing that the student earned a grade of B or better in the course and the course being requested for transfer is equivalent to one of the courses in the certificate. Courses used for a previously awarded graduate degree or graduate certificate may not be counted toward the graduate certificate.

Students who do not have any healthcare administration or management experience may wish to consider doing an internship type experience when they complete the requirements for the certificate since such experiences may enhance their opportunity for employment. Such internships may be done by enrolling in HSC 595 or could be an experience arranged by the student independent of the University.

Required Courses (18 hours)

- 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 Implication 3(3-0)
- HSL 651 - Fundamentals of Healthcare Finance 3(3-0)
- HSL 661 - Healthcare Planning & Marketing 3(3-0)

Total: 18 semester hours

Graduate Certificate in International Health

Minimum Totals for Graduation: 15 - 18 hours

The Graduate International Health Certificate is designed to provide a structured curriculum leading to knowledge, skills and abilities relevant to international health as well as provide a marketable credential for students achieving the certification. The certificate program will emphasize international travel as a key component of the curriculum, recognizing international travel as fundamental to learning about international health. The objectives of the program center on facilitating a better understanding of international health issues and opportunities, the role of cultural differences in health and wellness, comparative health systems, and cross-cultural communication. Students enrolling in the certificate program must be admitted to the University as graduate students and be in good academic standing with the Office of Research and Graduate Studies. Students interested in the program should speak with a faculty member in the Health Administration Division. School of Health Sciences for program details and advisement. The certificate curriculum is as follows:

Required Courses I (5-6 hours)

- HSC 516 - Travel Course in Health Education 1-15(Spec)
- HSC 552 - International Health Systems, Organizations and Policy 3(3-0)

Note: HSC 516 for Required Courses I must be different from HSC 516 listed in Required Courses II and Electives.

Required Courses II (2-3 hours)

- HSC 516 - Travel Course in Health Education 1-15(Spec)

Note: This course must be different from HSC 516 listed in both Required Courses I and Electives.

Required Courses III (3 hours)

Select one of the following:

- DHA 704 - Population Health 3(3-0)
- DHA 728 - Comparative Health Systems 3(3-0)

Electives (3-8 hours)

Select from the following:

- ANT 520 - Medical Anthropology 3(3-0)
- COM 667 - Seminar in Intercultural Communication 3(3-0)
- HSC 504 - International Health Education 3(3-0)
- HSC 516 - Travel Course in Health Education 1-15(Spec)
- IPS 597 - International Program Studies 1-36(Spec)
- PSC 551 - Seminar in International Relations 3(3-0)
Master of Science in Administration (M.S.A.)
CONCENTRATION IN HEALTH SERVICES ADMINISTRATION

The Master of Science in Administration Program requires 36 Credit Hours of graduate study. The MSA Program provides students with the fundamental principles required for successful administrative careers in the public, private, or nonprofit sectors.

The required core courses of the MSA program (18 Credit Hours) provide a comprehensive overview of organizational and human relationships and the administrative mechanisms through which to make sound analytical judgments and decisions.

The Health Services Administration Concentration (15-18 Credit Hours) provides the knowledge and skills required for directors, administrators, and supervisors in the health services field.

Please go to page 190 for Concentrations or to https://www.mich.edu/MSA.

Course Descriptions: DHA

DHA 700 Leadership Strategies for Healthcare Policy and Organizations 3(3-0)
The course examines the role of leaders in improving healthcare organizations; and the relationship between leading organizations and influencing and understanding health policy. This course may be offered in an online or hybrid format. Prerequisite: Admission to the Doctor of Health Administration Program.

DHA 702 Probability and Statistics for the Health Professions 3(3-0)
This course introduces statistical/quantitative techniques including general linear models, survey research methodology and research application cases, decision-making and problem-solving for health administration. Prerequisites: admission to the Doctor of Health Administration program; DHA 702. This course is approved for offering in a distance learning format.

DHA 704 Population Health 3(3-0)
This course explores applied epidemiology in relation to population and health including standardizing information, marketing, community health technologies and monitoring health behaviors of target groups. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

DHA 705 Seminar in Public Health 1(1-0)
This seminar focuses on current issues in health promotion and disease prevention, applied epidemiology, community health concerns and how to positively impact health in communities. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration program.

DHA 706 Quantitative Analysis in Health Organization 3(3-0)
This seminar will examine current issues, trends and the change necessary to improve the health system using a variety of presentations, group interactions and discussion. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration program.

DHA 707 Seminar in Health Dynamics: Current Issues, Trends and Change 1(1-0)
This seminar will examine current issues, trends and the change necessary to improve the health system using a variety of presentations, group interactions and discussion. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration program.

DHA 710 Qualitative Analysis in Health Care 3(3-0)
This course explores current issues, trends and the change necessary to improve the health system using a variety of qualitative research, group interactions and discussion. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Doctor of Health Administration program.

DHA 712 Research Methods and Practice for the Health Professions 3(3-0)
This course provides theoretical and applied concepts, techniques, procedures and technologies used in scientific inquiry and reporting for applied clinical, health administrative and managerial research. Prerequisites: admission to the Doctor of Health Administration program; DHA 702. Recommended: DHA 706. This course is approved for offering in a distance learning format.

DHA 713 Seminar in Health Services Research 1(1-0)
This seminar will examine research activity and reporting in the areas of health-care financing, organization delivery, access and outcomes of health services. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Doctor of Health Administration program; DHA 712.

DHA 714 Health Systems Thinking and Practice 3(3-0)
This class examines systems thinking and organizational effectiveness. Students will practice using a variety of systems tools as applied to different organizational problems. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

DHA 716 Communication in Health Organizations 3(3-0)
This class examines the delivery and exchange of messages within health organizations. Contexts will include conflict, negotiating, networks, channel selection, knowledge management and public relations. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

DHA 717 Seminar in Healthcare Dynamics: Stakeholder Relations 1(1-0)
This seminar will examine the concept of leadership style and how healthcare executives can more effectively communicate with multiple stakeholders both inside and outside the organization. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration program.

DHA 718 Healthcare Law, Regulations and Ethics 3(3-0)
This course explores the legal and ethical issues found in the healthcare system, and investigates the healthcare administrator as decision-maker, leader and moral agent. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

DHA 720 Health Economics 3(3-0)
This course focuses on the fundamental concepts and applications of managing information as a healthcare corporate asset, emphasizing converting data into information for decision support. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

DHA 721 Seminar in Healthcare Policy and Politics 1(1-0)
This seminar will examine current issues, trends and the change necessary to improve the health system using a variety of presentations, group interactions and discussion. CR/NC only. This course is approved for offering in a distance learning format.

DHA 724 Fiscal Responsibility and Accountability for Health Entities 3(3-0)
This seminar will examine current issues, trends and the change necessary to improve the health system using a variety of presentations, group interactions and discussion. CR/NC only. This course is approved for offering in a distance learning format.

DHA 725 Seminar in Strategic Planning for Health Organizations 1(1-0)
This seminar will examine the concepts, processes and integration of management information systems, financial, human resource and marketing plans into an organizational strategic planning system. This course is approved for offering in a distance learning format. CR/NC only. Prerequisites: admission to the Doctor of Health Administration program.

DHA 726 Applied Leadership 3(3-0)
This seminar will examine the concepts, processes and integration of management information systems, financial, human resource and marketing plans into an organizational strategic planning system. This course is approved for offering in a distance learning format. CR/NC only. Prerequisites: admission to the Doctor of Health Administration program.

DHA 728 Comparative Health Systems 3(3-0)
This course provides theoretical and applied concepts, techniques, procedures and technologies used in scientific inquiry and reporting for applied clinical, health administrative and managerial research. Prerequisites: admission to the Doctor of Health Administration program. This course may be offered in an online or hybrid format.

DHA 898 Dissertation 1-12(Spec)
The dissertation is the capstone of the academic program involving original research by student in conjunction with a committee resulting in a publishable document. CR/NC only. This course may be offered in an online or hybrid format. Prerequisites: Successful completion of the Doctor of Health Administration comprehensive examination; acceptance into Degree Candidacy by the College of Graduate Studies; and permission of the Program Director.
Course Descriptions: HSC

HSC 500 Health Informatics 3(3-0)
Overview of the broad spectrum of healthcare informatics issues, challenges and opportunities faced by healthcare managers. Emphasis is on managing healthcare information as a corporate asset and on the relationship of health informatics to the quality, accessibility and cost of healthcare. Prerequisites: HSC 317.

HSC 503 Health Implications of Obesity 3(3-0)
Obesity and overweight will be studied with special emphasis on diet, nutrition, and exercise. Modes of prevention and treatment will also be discussed.

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 the College of Graduate Studies, or Junior or Senior undergraduate standing.

HSC 505 Work Injury Prevention 3(3-0)
The study of etiology, epidemiology, treatment, management and prevention of neuromuscular and musculoskeletal injuries in workplace settings. Prerequisites: HSC 211 or HSC 214.

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 or hybrid format.

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 enrollment. 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 514 Biostatistics and Epidemiology 3(3-0)
This course presents biostatistical and epidemiological concepts, principles and methods as they apply to problems within community and public health environments. Prerequisites: MTH 105; HSC 317.

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 or hybrid format.

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. Prerequisites: HSC 106, or teaching certificate. This course is approved for offering in a distance learning format.

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)
Developing an understanding of diversity issues in order to become a more effective multiculturally competent health practitioner. Prerequisites: HSC 106 or 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)

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 538 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 proposals, reports, and publications.

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 administration, and medical data. Prerequisites: STA 282 or PSY 211 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, 539.

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)
Health risk factors associated with cardiovascular and other chronic diseases will be identified and studied. Management, and risk to morbidity and mortality will be emphasized. This course is approved for offering in a distance learning format. Prerequisite: A signed major in one of the following: Health Fitness in Preventive and Rehabilitative Programs Major, Community Health Education Major, or Exercise Science Major (Clinical Exercise Science, Health Fitness, or Kinesiology Option).

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 420, 308, 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 552 International Health Systems, Organizations and Policy 3(3-0)
This course presents an overview of health systems structure, service delivery, administrative processes and policy dimensions from an international perspective. Health systems, programs and initiatives from various countries and cultural settings are studied as are global health agencies involved in the coordination of health improvement efforts. This course is approved for offering in a distance learning format. Prerequisites: HSC 317.

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 surrounding financial administration of health services organizations, particularly hospitals. Prerequisite: ACC 201.
HSC 571 Legal Aspects of Health Services Organizations 3(3-0)
The issues studied are hospital liability, informed consent, medical staff appointment, tort and health services, ethical issues related to health care.

HSC 572 Quality Improvement in Health Services 3(3-0)
Basics, implementation and application of quality management and improvement specific to health care. Statistical principles and illustrative cases are presented. Recommended: HSC 520.

HSC 573 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: Clinical 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 cardiovascular disease risk factors of children (CVDRF). Students will be involved in 45 hours of service learning, screening CVDRF of area children. Prerequisites: HSC 214, 215, and 220.

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 healthcare 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 598 Nature and Dynamics of Destructive Health Habits 3(3-0)
An examination of the behavioral, social, and cultural contexts of destructive health habits and the detrimental health habits which undermine healthy lifestyles. Prerequisites: HSC 235.

HSC 604 Epidemiology 3(3-0)
Factors related to the manifestation of infectious and non-infectious diseases, including tracing their sources, controlling spread, and initiating measures to prevent recurrences.

HSC 612 Individualized Learning Experiences 1-10(Spec)
An advisor or an advisory board will assign health-education learning experiences based on needs, background, and projected goals. Students must have the approval of their academic advisors before registering for the course. CR/NC only. Prerequisites: Approval of the academic advisor and permission of the course advisor.

HSC 617 Community and Public Health 3(3-0)
Problems of public health, public health services available to the community, and organization of programs of local, state, and national health agencies.

HSC 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

HSC 620 Adult Health Education Theory and Practice 3(3-0)
Adult learning theories and educational methods as they apply to health education and promotion, with an emphasis on theory-grounded program design, implementation, and evaluation.

HSC 630 Regional Human Anatomy 5(3-4)
A regional approach to the structure of the human body, concentrating on the interrelationships of different anatomical structures and their clinical applications. Prerequisites: HSC 214; admission to physical therapy program, physician assistant program or graduate program in exercise science.

HSC 631 Physiology of Exercise 4(3-2)
Physiological basis of human movement and its application to training and performance. Identical to PES 631. Credit may not be earned in more than one of these courses.

HSC 640 Curriculum Design in Health Education 3(3-0)
Systematic development of learning components for the health profession.

HSC 646 Methods of Instruction and Allied Health Profession 3(3-0)
A course designed to familiarize the student with the theory and application of teaching methodologies for the health professional. Not open to students with credit in HSC 346.

HSC 670 Research Methods for Health, Physical Education and Sport, Health and Recreation 3(3-0)
Basic research methods and techniques essential in performing and interpreting scientific studies. Identical to PES 670. Credit may not be earned in more than one of these courses. Recommended: 6 hours of graduate course work completed prior to enrollment.

HSC 700 Program Evaluation in the Health Fields 3(3-0)
Major concepts, issues, and methodologies concerning the evaluation of health services delivery systems will be presented. Included is design, reporting, and utilization of findings.

HSC 727 Professional Seminar 3(3-0)
The study of health education/promotion which includes history, foundations, literature, ethics and philosophy, professional standards and practice at the state, national and international levels. Prerequisites: 20 completed hours in health education.

HSC 791 Independent Study 2-3(Spec)
Offered in the classroom, online or hybrid. Prerequisite: 6 hours of graduate course work completed prior to enrollment.

HSL 611 Healthcare Administration and Ethical Compliance 3(3-0)
This course emphasizes administrative, organizational and ethical theory, principles, and concepts as they relate to healthcare leadership decision-making and accountability. This course may be offered in the classroom, online or hybrid.

HSL 621 Healthcare Operations and Structures 3(3-0)
Examination of organizational and structural issues in healthcare organizations, concentrating on Managed Care operations and Accountable Care Organizations. This course may be offered in the classroom, online or hybrid.

HSL 631 Healthcare Law, Compliance and Risk Management 3(3-0)
This course emphasizes legal, compliance and risk management theory, principles, and concepts as they relate to healthcare organizational decision-making and accountability. This course may be offered in the classroom, online or hybrid.

HSL 641 Health Economics and Policy Implication 3(3-0)
This course emphasizes the relationship between health economics and the development of health care policy in the United States and globally. This course may be offered in the classroom, online or hybrid. Recommended: A course in Economics such as ECO 201, 202, or 203; or a graduate course in Economics.

HSL 651 Fundamentals of Healthcare Finance 3(3-0)
This course focuses on the most important accounting and financial management principles and concepts relevant to department-level management of health services organizations. This course may be offered in the classroom, online or hybrid. Prerequisites: A course in accounting such as ACC 201 or ACC 250; or a graduate course in accounting.

HSL 661 Healthcare Planning & Marketing 3(3-0)
This course emphasizes models and methods for effectively planning for the delivery of healthcare services and the marketing of those services. This course may be offered in the classroom, online or hybrid.

Course Descriptions: MPH

MPH 640 Biostatistics 4(3-1)
This course provides advanced knowledge and skills to probability and statistics, enabling students to use statistical software to analyze datasets related to public health problems. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MPH Program.

MPH 642 Health Education Theories 3(3-0)
The course evaluates theories in health promotion and health education and illustrates how divergent theoretical perspectives are integrated into practice models. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MPH Program.
**Department of History (HST)**

**College of Humanities and Social & Behavioral Sciences**

**Mitchell Hall, Chairperson**  
Powers Hall 106, (989) 774-3374

**Admission Requisite Details Below**

**History**

**Admission Requisite Snapshot**

**GPA:** 2.7 (and 2.7 in major)  
**Application Deadline:** July 15 (Fall), Nov. 1 (Spring)  
See Admission Requirement Details Below

To be admitted to the Master of Arts program, a student must present 20 or more hours of history or historically oriented courses in related fields with a grade point average in history of 2.7 or higher.

**Admission Deadlines**

For the traditional M.A., students wishing a fall semester admission must apply no later than July 15. For spring semester admission the deadline is November 1.
Required Courses
HST 600 - Historiography 3(3-0)
1. Thirty (30) hours of graduate coursework, including HST 600.
2. At least eighteen (18) hours of coursework must be completed at or above the 600 level. At least twenty (20) hours must be completed in history courses.
3. Ten (10) or fewer cognate hours may be selected with an advisor from one or more of the following fields: anthropology, economics, education, English, geography, philosophy, political science, religion, and sociology. Other fields may be approved by the advisor.
4. At least two history colloquia at the 600 level (HST 690 will not satisfy this requirement).
5. Additional Requirement for the Accelerated Master of Arts program: Three to twelve (3-12) hours of the above (except Thesis credit) must have been taken concurrently with the student’s B.A. degree work.

Additional Requirements
A minimum of six hours of history research and writing courses earned in one of the following ways:

Plan A - Thesis
A thesis, including an oral examination in the field of the thesis. Note for the accelerated Master of Arts program:
The accelerated plan is intended to encourage research and writing competency in a particular research field, and thus the candidate is encouraged to elect Plan A, the Thesis Option of the M.A. program.

Plan B - Seminars
Either (1) two seminars or (2) one seminar and three hours in HST 791. Students electing Plan B must submit two research papers as evidence of scholarship. These papers must be prepared in connection with a seminar, an independent research course, or a graduate-level course in the Department of History. Each paper must receive a minimum grade of B. In addition, normally after revision, each must be accepted by the professor responsible for the course as satisfactory for permanent filing. Papers must be well written and presented in a proper scholarly format. Their conclusions must rest on interpretation of a substantial body of primary sources. A minimum 6,000 words is suggested.

Total: 30 semester hours

ACCELERATED MASTER OF ARTS IN HISTORY
(Currently enrolled CMU Undergraduate students only)

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. Maintenance of a 3.5 GPA in history courses.
2. Failure to maintain satisfactory work (3.0 GPA) in two successive semesters will result in removal from the accelerated program.
3. Candidates for the accelerated program must seek graduate school approval of courses selected to double count on both the B.A. and M.A.

Students considering an accelerated M.A. program should be aware that their financial aid may be affected for courses double counting on the B.A. and M.A. Contact the Office of Scholarships & Financial Aid for information at 989-774-3674 or cmuosfa@cmich.edu.

Graduate Certificate in European History
Minimum Totals for Graduation: 18 hours
This 18 credit hour certificate is designed for regularly admitted graduate students who desire advanced training in European history, but who are not seeking a master’s degree at this time. Credits successfully earned with this certificate program can be transferred toward the M.A. degree. Students may substitute courses only upon approval of the History Graduate Studies Committee. Admission is through the Office of Research and Graduate Studies. Students pursuing this certification program should have some prior coursework in European history.

This certificate is granted upon completion of 18 hours within the selected area.

Required Courses (6-18 hours)
At least 6 hours must be taken at the 600-level or above, selected from the following courses:

HST 636 - Colloquium in Ancient History 3-6(3-0)
HST 650 - Colloquium in European History to 1450 3(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 738 - Seminar in Ancient History 3-6(3-0)
HST 740 - Seminar in Medieval West 3(3-0)
HST 741 - Seminar in Early Modern Europe 3(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)

Electives (0-12 hours)
All courses must be selected from the department’s course offerings in European history.

Total: 18 semester hours

Graduate Certificate in Modern History
Minimum Totals for Graduation: 18 hours
This 18 credit hour certificate is designed for regularly admitted graduate students who desire advanced training in modern history, but who are not seeking a master’s degree at this time. Credits successfully earned with this certificate program can be transferred toward the M.A. degree. Students may substitute courses only upon approval of the History Graduate Studies Committee. Admission is through the Office of Research and Graduate Studies. Students pursuing this certification program should have some prior coursework in modern history.

This certificate is granted upon completion of 18 hours within the selected area.

Required Courses (6-18 hours)
At least 6 hours must be taken at the 600-level or above, selected from the following courses:

HST 603 - Colloquium in Medieval Europe 3-6(3-0)
HST 617 - Colloquium in Twentieth-Century American History 3-6(3-0)
HST 650 - Colloquium in European History to 1450 3(3-0)
HST 738 - Seminar in Ancient History 3-6(3-0)
HST 740 - Seminar in Medieval West 3(3-0)
HST 741 - Seminar in Early Modern Europe 3(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)

Electives (0-12 hours)
All courses must be selected from the department’s course offerings in modern history.

Total: 18 semester hours
Graduate Certificate in United States History

Minimum Totals for Graduation: 18 hours

This 18 credit hour certificate is designed for regularly admitted graduate students who desire advanced training in United States history, but who are not seeking a master’s degree at this time. Credits successfully earned with this certificate program can be transferred toward the M.A. degree. Students may substitute courses only upon approval of the History Graduate Studies Committee. Admission is through the Office of Research and Graduate Studies. Students pursuing this certification program should have some prior coursework in United States history.

This certificate is granted upon completion of 18 hours within the selected area.

Required Courses
At least 6 hours must be taken at the 600-level or above, selected from the following courses:

- HST 602 - Colloquium in U.S. History to 1865 3(3-0)
- HST 603 - Colloquium in U.S. History Since 1865 3(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 715 - Seminar in the Civil War and Reconstruction 3(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)

Electives (0-12 hours)
All courses must be selected from the department’s course offerings in United States history. No more than 3 hours may be taken below the 500-level, and then only if approved for graduate credit.

Total: 18 semester hours

Joint M.A. in History

Minimum Totals for Graduation: 36 hours

The Joint Master of Arts degree is offered in association with a partner institution abroad.

This degree requires two years of study. Students will complete a year’s study (at least 18 credits with a minimum 3.3 GPA) at Central Michigan University and a one-year diploma sequence of courses at a partner institution. Students entering the program at a partner institution will receive one year’s credit towards the Joint M.A. for completion of a final post-baccalaureate program entirely in history at a partner institution with the equivalent of a 3.3 GPA. They will then complete the requirements for the Joint M.A. with a prescribed year of study at Central Michigan University.

Certain rules govern the combined two-year program:
1. No more than 50 percent of a student’s coursework may be in a single national field.
2. All students must write at least two research papers suitable for filing as evidence of scholarly achievement, 7,000-10,000 words: one completed in a research seminar at CMU and one completed at a partner institution.

It is strongly recommended that students develop a reading knowledge of at least one language other than English or an appropriate research tool such as statistics.

Optional Courses

Students must complete all application materials prior to January 3 for admission to the program in the upcoming fall. Admission is competitive.

Required Courses I (18 hours)
At Central Michigan University: 18 hours of which 12 hours must be at the 600 level or above, including 3 hours in a research seminar at the 700 level, one colloquium in transnational and comparative history (3 hours) and a second colloquium (3 hours). A maximum of 6 hours in cognate disciplines will be accepted if approved by the student’s CMU and partner institution’s advisors.

Year at CMU
As evidence of scholarship, students must submit a research paper for a permanent file. This paper must be prepared in connection with a research seminar, an independent research course, or a graduate-level course in the Department of History. The paper must receive a minimum grade of B. In addition and normally after revision, the paper must be accepted by the professor responsible for the course as satisfactory for permanent filing. The paper must be well written and presented in a proper scholarly format. Its conclusions must rest on interpretation of a substantial body of primary sources. A minimum length of 7,500 words is suggested. Up to 3 hours of credit may be earned for a practicum course in teaching history at the college level.

Required Courses II (18 hours)
At a partner institution abroad: 18 hours (equivalent) including major research paper/dissertation of 7,500 words or more (equivalent to a 700-level seminar requirement at CMU).

Year abroad
The student must complete based on the partner institution’s post-baccalaureate course requirements. General expectations include one course of study in historical methodology if they have not taken such a course at CMU (3-6 hours equivalent), one research seminar paper/dissertation of 7,000-10,000 words (3 hour equivalent) and 9-12 hours (equivalent) of additional course work or directed study.

Total: 36 semester hours

Joint Ph.D. in History

Minimum Totals for Graduation: 90 hours

<table>
<thead>
<tr>
<th>Admission Requirements, Retention &amp; Termination Standards</th>
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<tbody>
<tr>
<td>GPA: 3.3</td>
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<td>Application Deadline: Jan. 3 (Fall)</td>
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Admission to doctoral study requires the following:
1. Successful applicants will ordinarily have completed a bachelor’s degree or equivalent with at least 20 hours of history or related courses with a GPA of 3.3 or higher.
2. Students in the Ph.D program must maintain at least a 3.3 GPA (or its equivalent at foreign institutions) after the first year of study at Central Michigan University.
3. All applications should include a personal statement of 2-3 pages (600-900 words) describing general fields of interest and proposed subjects of research; preparation for the subjects proposed, including specific coursework, languages, and other relevant training; professional goals.
4. Candidates must submit GRE scores by January 3. The subject area test in History is not required.
5. Students for whom English is a second or third language may submit TOEFL scores in place of the GRE.
6. Candidates are strongly urged to gain proficiency in at least one language other than English relevant to their intended field of study prior to admission to the Ph.D. program. Candidates able to demonstrate such proficiency will receive preference in the admissions process, all other qualifications being equal.
7. The application deadline is January 3.
**Admission to candidacy for the Ph.D. requires:**

1. Approval of dissertation prospectus.
2. Completion of all language requirements.
3. Demonstration of comprehensive knowledge fields in history, as defined below, by means of oral and written comprehensive examinations. With the exception of the Atlantic World, which is equivalent to two major fields, students must present either (a) two major fields or (b) one major field and two minor fields.

**Major Fields**
- United States
- British Isles
- Modern Continental Europe
- Early Modern Europe
- Latin America
- Ancient Mediterranean
- The Atlantic World: Comparative North American, European, African, and Latin American History. (Because of its scope, this meets all field requirements.)

**Minor Fields**
- United States*
- British Isles*
- Modern Continental Europe*
- Early Modern Europe*
- Latin America*
- Ancient Mediterranean*
- Ancient Near East
- Medieval Europe
- Middle East
- East Asia
- India
- Africa
- Topical Fields (must be transnational): e.g. Crime; Poverty and Social Welfare; Business; Women; Slavery; Ethnicity and Race; Minority Communities and Culture; Reform; Regionalism

*Not available for minor if chosen as major.

**Degree Requirements**

Students must complete the following sequence during their first two years in the Joint Program:

**Required Courses I (18 hours)**

At Central Michigan University: 18 hours of which 12 hours must be at the 600 level or above, including 3 hours in a research seminar at the 700 level, one colloquium in transnational and comparative history (3 hours) and a second colloquium (3 hours). A maximum of 6 hours in cognate disciplines will be accepted if approved by the student’s CMU and partner institution’s advisors.

**Year at CMU.** As evidence of scholarship, students must submit a research paper for a permanent file. This paper must be prepared in connection with a research seminar, an independent research course, or a graduate-level course in the Department of History. The paper must receive a minimum grade of B. In addition and normally after revision, the paper must be accepted by the professor responsible for the course as satisfactory for permanent filing. The paper must be well written and presented in a proper scholarly format. Its conclusions must rest on interpretation of a substantial body of primary sources. A minimum length of 7,500 words is suggested. Up to 3 hours of credit may be earned for a practicum course in teaching history at the college level.

**Required Courses II (18 hours)**

At a partner institution abroad: 18 hours (equivalent) including major research paper/dissertation of 7,500 words or more (equivalent to a 700-level seminar requirement at CMU).

Students entering the Joint MA at CMU may earn a second MA abroad from the partner institution program in which they are studying in addition to the Joint MA from CMU.

Students admitted to the Joint MA program with a previously earned MA in history or related field from an institution abroad may fulfill this study abroad requirement by transferring up to 18 credit hours from the program where they earned the degree. Students seeking transfer of such credit must submit evidence demonstrating that the work completed was substantially equivalent in type and degree of rigor to those offered at partner institutions.

Students admitted to the Joint PhD program who complete the requirements for the first two years of study will be eligible to receive the Joint MA degree enroute to completing the PhD.

**Required Courses III (18-34 hours)**

Students continuing in the program in the third year and beyond must also complete the following requirements:

18 hours post-M.A. elective course work in preparation for field examinations, of which 9 hours must be at the 700 level or above excluding practicums.

**Required Courses IV (20-36 hours)**

Additional Requirements for candidacy and completion of degree program:

1. Candidates for the Ph.D. in history must demonstrate reading knowledge of two languages other than English or reading knowledge of one language other than English plus an appropriate research tool such as statistics. Students whose only major field is United States history need to demonstrate reading knowledge of only one language other than English.
   a. Completion of the language requirement is defined as reading proficiency at least at a level sufficient to conduct graduate-level research.
   b. Completion of the language requirement may be fulfilled in one of the following ways:
      1) an examination in which the candidate with the aid of a dictionary will translate, idiomatically, at least two passages totaling no less than 500 words within two hours;
      2) completion of CMU’s 202 language course or its equivalent with a grade of at least a B;
      3) intensive language study abroad in a program approved by the department’s Graduate Studies Committee; or
      4) an alternative approved by the Graduate Studies Committee. Intensive language study abroad is especially recommended by the department.
   c. Graduate students whose native language is other than English, and who have met the CMU Graduate Studies admissions requirements for English language proficiency, will be required to demonstrate reading knowledge of one language other than English or an appropriate research tool such as statistics.
   d. Ph.D. students may complete up to 9 hours of language course work for a language which is demonstrable required for their dissertation research. Credit may be applied to the student’s record in lieu of up to 9 hours of elective dissertation credit.
   e. All language requirements must be completed prior to admission to Ph.D. candidacy.

2. The Ph.D. from Central Michigan University will require a minimum of 90 hours (including 36 hours of dissertation credit) of approved graduate-level study beyond the B.A. Students who complete the requirements for the Joint M.A. (36 hours) before admission to the Ph.D. program may include their hours earned at the M.A. level within the 90 hour total required for the Ph.D.

3. The Ph.D. from CMU requires completion of a doctoral dissertation that makes significant contribution to knowledge, contains a significant comparative element, and is successfully defended at a formal meeting of the student’s examining committee. Upon admission to candidacy, the student and the chair of the history department of the university where the student is currently in residence will select a committee of three faculty members, at least one from each university, to advise the candidate and supervise the research and writing of the dissertation. Dissertations ground in two or more national histories will be encouraged. The examining committee for the dissertation will consist of three faculty members from the university where the majority of research has been done, at least one faculty member from the (Continued)
other university, and at least one external examiner. The chair of the examining committee will serve as director of the candidate's dissertation and will be responsible for making all arrangements for meetings of the committee.

Because it is impossible to share the legal authority to award the Ph.D., it will be awarded to some students by Central Michigan University and to others by the partner institution upon successful completion of the shared program. In all cases, the relevant documents will say clearly that the degree results from the shared program. Regulations governing residency requirements and time limitations for completion of degrees will be those of the university granting the degrees. Student work at either university will be treated as work in residence by both the partner institution and Central Michigan University.

Total: 90 semester hours

Master of Arts (M.A.) or Graduate Certificate in Cultural Resource Management

These programs are interdisciplinary. Please see the index for the page number.

Course Descriptions: HST

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, 102, 350, 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, 310; or graduate status.

HST 514 Democracy, Expansion, and Reform in America, 1824-1848 3(3-0)
America changed dramatically between 1824 and 1848. This course explores relations with Native Americans, political democracy, industrialization, women's roles, reform, westward expansion, and slavery. 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 Jacksonian Era, students should be broadly familiar with basic periods and developments in nineteenth century America.

HST 515 Civil War and Reconstruction 3(3-0)
Causes and consequences 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 517 U.S. Rise in World Leadership, 1917-1945 3(3-0)
The United States as a world power after World War I, the decade of the 1920s, the depression era, the impact of modern global war.

HST 518 African Americans and the Law: From Slavery to Civil Rights 3(3-0)
Course examines the unique relationship between African Americans and the American legal system from Colonial times to the present. May be offered as Writing Intensive. Recommended: one of HST 111, 320, 324; one of HST 112, 321, 325; or graduate standing.

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 523 American Diplomatic History, 1775-1898 3(3-0)
The major issues in American diplomacy, beginning with the birth of the Republic and continuing to the Spanish-American War. Prerequisites: HST 110, HST 115.

HST 524 American Diplomatic History Since 1898 3(3-0)
The major issues of United States diplomacy, beginning with the Spanish-American War and continuing to the present.

HST 525 The Industrialization of America 3(3-0)
This course analyzes how industrialization transformed America and how it altered living standards, culture, labor, business, and politics. This course may be offered in an online format. May be offered as Writing Intensive. Recommended: At least 12 hours of humanities and social science.

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 535 The Middle East in the Modern Era 3(3-0)
An examination of the history of the Middle East and its relations with Europe and the United States from the 17th century to the present. May be offered as Writing Intensive. Prerequisites: HST 237 or graduate standing.

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 538 Athen: Classical Period 3(3-0)
Athenian political and social change in the sixth and fifth centuries B.C. relying primarily on contemporary or near contemporary documents in translation. Recommended: HST 238.

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 548 Russian Thought 3(3-0)
Currents of Russian thought. Emphasis on the nineteenth century.

HST 558 Europe, 1914-1945 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 560 Mind Games 3(3-0)
Students propose, design, and develop role-playing and other face-to-face games for use in the history classroom. Prerequisite: Advanced undergraduate or graduate standing.

HST 562 The Atlantic World in the Age of Empire 3(3-0)
Study of the political, social, cultural and economic interactions of Europe, Africa, and the Americas from the fifteenth to the nineteenth century. Recommended: One of: HST 111, HST 163, HST 176, HST 324, HST 341, HST 377, HST 511.

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 578 Public History 3(3-0)
How 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 HST 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 HST 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)
Selected topics studied in special arrangement with an instructor. Prerequisites: junior or senior standing with a B average in 12 hours of history, or graduate status; and permission of the instructor and the department chairperson.

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.

HST 600 Historiography 3(3-0)
History as a discipline, studied from the works of selected historians. Recommended: 12 hours of junior, senior, or graduate-level history.

HST 601 Colloquium in Transnational and Comparative History 3(3-0)
An intensive investigation of historiographical issues in transnational and comparative history. A student must have taken this course twice, for three hours of credit each time, but must choose a second instructor for the second three hours. Prerequisites: Admission to one of the graduate history programs.
HST 602 Colloquium in U.S. History to 1865 3-6(3-0)
An investigation of historical interpretations and methodologies dealing with major themes in American history from 1607 to 1865. Recommended: Admission to graduate program in history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 603 Colloquium in U.S. History Since 1865 3-6(3-0)
An investigation of historical interpretations and methodologies dealing with major topics and themes in American history from 1865 to present. Recommended: Admission to the graduate program in history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 619 Continuing Registration for Final Research Project 1-1(0)
A non-credit course intended for students who have completed all course credits but still need to use university resources to complete their degree requirements.

HST 636 Colloquium in Ancient History 3-6(3-0)
An investigation of major historical issues, interpretations, and methods in the history of the ancient Near/Intermediate and Mediterranean regions to 600 C.E. Recommended: Admission to the graduate program in history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 637 Colloquium in the Modern Middle East 3-6(3-0)
A historiographical investigation of major topics, interpretations, and methodologies in Modern Middle Eastern history, post-18th century C.E. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours. Prerequisite: Admission to the graduate program in history. Recommended: 6 hours of Middle Eastern history.

HST 650 Colloquium in European History to 1450 3(3-0)
An investigation of historians, their interpretations and methodologies on the major topics and theories in ancient and medieval history to 1450. Recommended: Admission to the graduate program in history.

HST 651 Colloquium in Early Modern European History 3-6(3-0)
An investigation of historical interpretations and methods in early modern European history (1300-1789). Recommended: Admission to graduate program in history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 652 Colloquium in Modern European History 3-6(3-0)
An analytical investigation of several historical issues, topics, and themes in modern European history (1789 to the present). Recommended: Admission to the graduate program in history. A student may take this course twice, for 3 credit hours each, but must choose a second instructor for the second 3 hours.

HST 663 Colloquium in Colonial Latin American History 3-6(3-0)
A historiographical investigation of major topics, interpretations, and methodologies in Colonial Latin American history. A student may take this course twice, for 3 credit hours each, but must choose a second instructor for the second 3 hours.

HST 681 Historic Preservation 3(3-0)
Learn why historic preservationists chain themselves to structures, pursue property rights, and develop long-range plans. This course explores historic preservation theory, methods, and ethics. Prerequisites: 3 hours of History and 3 hours of Museum Studies; or admission to the graduate program in history. Recommended: At least 2 of the following: HST 532, 595, 600, 710, HST 546, 550, 551.

HST 690 Advanced Readings 1-9(Spec)
Prerequisites: 12 hours of junior, senior, or graduate-level history and permission of the department chairperson and the instructor.

HST 695 Special Studies Abroad 3-15(Spec)
Courses on selected historical issues offered at partner institutions for students in the joint graduate program. Prerequisites: Admission to the joint graduate program in history.

HST 697 Special Studies Colloquio 3-6(3-0)
An investigation of historical interpretations and methodologies of a selected historical topic at a level suitable for graduate students. A student may take this course twice, for three hours of credit each time, but must choose a second instructor for the second three hours. Recommended: Admission to the graduate program in history.

HST 700 Practicum in College Teaching 1-6(Spec)
Training and practice in teaching history at the college level. Prerequisites: appointment as a Graduate Assistant in the Department of History.

HST 710 Seminar in Intellectual and Cultural History 3-6(3-0)
Study of a selected topic in intellectual and cultural history. Recommended: Admission to graduate program in history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 711 Seminar in Colonial and Revolutionary America 3-6(3-0)
Study of a selected topic in the history of colonial British and Revolutionary America. Preparation of a research paper based on primary sources. Recommended: HST 111, HST 511, and at least one of the following: HST 323, HST 324, HST 326, HST 330, HST 351, HST 512, HST 562, HST 602. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 713 Seminar in the History of Nineteenth Century America 3-6(3-0)
Study of a selected topic in the history of nineteenth century America. Recommended: HST 111 or HST 112 plus at least one more course in this period of American history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 715 Seminar in the Civil War and Reconstruction 3(3-0)
Principally devoted to research training and writing techniques, this seminar will focus on a particular phase of the Civil War era. Recommended: HST 111 and HST 112, and a 500-level course in nineteenth century American history.

HST 717 Seminar in the History of Twentieth Century America 3-6(3-0)
Study of a selected topic in the history of the United States in the twentieth century. Recommended: HST 111 plus at least one more course in this field of American history. A student may take this course twice, for 3 credit hours each time, but must choose a second instructor for the second 3 hours.

HST 723 Seminar in American Diplomatic History 3(3-0)
Primarily devoted to research training and writing techniques, each seminar will focus on a particular phase of American diplomatic history. Recommended: HST 111 and HST 112 and one course in US history.

HST 738 Seminar in Ancient History 3-6(3-0)
Study of a selected topic from the Ancient World. Development of research skills and scholarly writing appropriate to the field. Recommended: 9 hours of pre-modern history or one year of an ancient language. A student may take this course twice, for 3 credit hours each time, but must choose a second instructor for the second 3 hours.

HST 740 Seminar in Medieval West 3(3-0)
Research training based on primary sources on topics pertinent to the medieval period. Recommended: 6 hours of history including HST 101 and one of the following: HST 200, HST 340, HST 350, HST 505, HST 650.

HST 741 Seminar in Early Modern Europe 3-3(0)
Study of a cultural, intellectual, social, political or economic issue of the period from the Renaissance in Europe to 1789. Recommended: 6 hours of history including HST 101 and one of the following: HST 340, HST 341, HST 348, HST 350, HST 351, HST 354, or HST 505.

HST 742 Seminar in Eighteenth-Century European History 3(3-0)
Study of a cultural, social, political or economic issue of the eighteenth century. Recommended: 6 hours of modern European history, including some study of the eighteenth century.

HST 744 Seminar in Nineteenth-Century European History 3-6(3-0)
Study of a major aspect of 19th-century Europe with emphasis on historical method. Recommended: HST 102 or HST 351 plus one additional course in this general area of European history. A student may take this course twice, for 3 credit hours each time, but must choose a second instructor for the second 3 hours.

HST 758 Seminar in Twentieth-Century European History 3-6(3-0)
Study of a major aspect of 20th-century Europe with emphasis on historical method. Recommended: 6 hours of European history (at least 3 at the 500 level) including one of the following: HST 102, HST 106, HST 558. A student may take this course twice, for 3 credit hours each time, but must choose a second instructor for the second 3 hours.

HST 763 Seminar in Latin American History 3(3-0)
Study of a selected topic in Latin American history. Recommended: HST 163 or an advanced course in the field of Latin American history.

HST 776 Seminar in Asian History 3(3-0)
Topics such as developments in education, medicine, women, child care, distribution of wealth, and decision-making in China since the Cultural Revolution (1966-1969). Recommended: HST 168.

HST 776 Seminar on African Diaspora History 3-6(3-0)
A study of a selected topic in the history of the African diaspora. Preparation of research paper based on primary sources. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

CR/NC only. Prerequisite: Admission to the joint graduate program in History.

HST 791 Graduate Research 3-6(Spec)
Prerequisites: 12 hours of junior, senior, or graduate-level history and permission of the department chairperson and the instructor.

HST 795 Seminar Abroad 3-15(Spec)
Seminar at partner institution for students in the joint graduate program. Student produces a substantial scholarly paper of 7,000-10,000 words based on primary sources. Prerequisites: Admission to the joint graduate program in History.

HST 798 Thesis 1-6(Spec)
CR/NC only. Prerequisite: Written permission of advisor and department chairperson.

HST 890 Doctoral Readings 1-9(Spec)
Advanced preparation for comprehensive examinations in selected historical topics directed by an individual instructor. Reading should reflect the fields of and culminate in the comprehensive examination. Prerequisites: Admission to the joint graduate program in History and permission of advisor or instructor.

HST 898 Dissertation 1-36(Spec)
CR/NC only. Prerequisites: successful completion of comprehensive examination for Ph.D. and written approval of dissertation proposal to take more than 3 credit hours of dissertation credit.
Department of Human Environmental Studies
(AMD, FMD, FNS, HDF, IND)
College of Education and Human Services

Megan Goodwin, Chairperson
EHS 228; (989) 774-3218

Su An, Ph.D., Body Scan Technology, Functional Apparel Design and Evaluation
Jeff Angera, Ph.D., Human Development & Family Studies
Deborah Bailey, Ph.D., Human Development & Family Studies
Carol Beard, Ph.D., Functional Design
Phame M. Camarena, Ph.D., Human Development & Family Studies
Tzu-Fen Chang, Ph.D., Child Development
Usha Chowdhary, Ph.D., Textile Analysis, Functional and Socio-Cultural Aspects of Clothing
Tanya Domina, M.S., M.B.A., Design and Retailing Technologies
Megan Goodwin, Ph.D., Child Development
Cheryl Geishardt, Ph.D., Human Development and Family Studies
Mikiyasu Hakoyama, Ph.D., Human Development & Family Studies
Roschelle Heuberger, Ph.D., R.D., Human Nutrition
Leslie Hildebrandt, Ph.D., R.D., Human Nutrition
Ann Jay, M.S., R.D., F.A.D.A., Human Nutrition and Dietetics
Yeonsoo Kim, Ph.D., R.D., Nutrition
Han-Jung Ko, Ph.D., Human Development and Family Studies
Chris Latty, Ph.D., Human Development & Family Studies
Seung-Eun Lee, Ph.D., Technology Applications in Fashion Retailing and Merchandising; Fashion Marketing
Joellen Lewsader, Ph.D., Developmental Studies
Edgar Long, Ph.D., Empathy and Romantic Relationships, Marriage
Maureen MacGillivray, Ph.D., Functional Apparel Design & Socio-cultural Aspects of Dress
Eileen MaloneBeach, Ph.D., Human Development & Family Studies
Michael Mamp, Ph.D., Apparel Merchandising and Design
Thamizhsai Periyaswamy, Ph.D., Advanced Material Characterization Methods, Human-centered Clothing Design Analysis
Tierney Popp, Ph.D., Human Development & Family Studies
Cheryl Priest, Ed.D., Child Development
Katie Reck, Ph.D., Human Development
Pamela Sarigiani, Ph.D., Human Development & Family Studies
Kristy Shih, Ph.D., Human Development & Family Studies
Najat Yahia, Ph.D., Nutrition

Master of Science (M.S.) in Apparel Product Development and Merchandising Technology

This program is designed to prepare graduates for positions in apparel and textile product design and development, CAD technology, industry research and development, as well as for careers in higher education and government. Creative solutions, cutting edge technology and real world applications are emphasized at all instructional levels.

Minimum Totals for Graduation: 33 hours

Admission Requirements, Retention & Termination Standards

<table>
<thead>
<tr>
<th>Admission Requirement Snapshot</th>
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</thead>
<tbody>
<tr>
<td>GPA: 3.0 (in the last 60 hours undergrad course work)</td>
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<tr>
<td>Entrance Exam: N/A</td>
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<tr>
<td>Intern'l Application Deadline: July 1 (Fall), Oct. 1 (Spring)</td>
</tr>
<tr>
<td>See Admission Requirement Details Below</td>
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</tbody>
</table>

Students applying for the M.S. degree should have a minimum of 12 hours of undergraduate coursework in apparel merchandising and design or closely related area.

Students accepted for the M.S. program who lack supporting course work generally are required to make up these deficiencies by taking undergraduate course work in apparel merchandising and design. Equivalent work experience in the field may be counted as supporting coursework toward minimum admission requirements.

Admission to the graduate program in Apparel Product Development and Merchandising Technology includes meeting the following criteria:

1. Submission of the CMU application form for admission to the Graduate School, found at https://centralink.cmich.edu/academics/grad_studies
2. An earned baccalaureate degree from an accredited institution.
3. Three letters of recommendation, including two from faculty. If it is not possible to obtain faculty references, references should be from professionals who can address your capacity to succeed as a graduate student.
4. One official transcript (with institution's seal) sent directly from each institution attended.
5. A minimum grade point average of 3.0 on a 4.0 scale in the last 60 hours of undergraduate course work.
6. A one-to-two page statement of objectives stating your reasons for pursuing a graduate degree in apparel merchandising and design, your career goals, and the specific area in which you would like to study.
7. Non-refundable application fee.

Degree Requirements

Foundational Courses (9 hours)
Research Methods and Statistics
FMD 604 - Scholarship in Textiles and Clothing 3(3-0)

Plus the following courses, which are to be selected in consultation with advisor:
• One graduate course (3 credits) in Research Methods
• One graduate course (3 credits) in Statistics

Required Courses (12 credit hours)
Apparel Merchandising & Design
Select from the following in consultation with advisor:
FMD 546 - Experimental CAD for Apparel 3-9(Spec)
FMD 547 - Functional Apparel Design 3(2-2)
FMD 550 - Global Apparel Supply Chain Management 3(3-0)
FMD 560 - Apparel Product Development 3(3-0)
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 658 - Apparel Retail Technology 3(3-0)
FMD 790 - Independent Study in Apparel Merchandising & Design 2-6(Spec)

Supporting Coursework (6 credit hours)

Courses that support the student's career objectives or research plans that are inside or outside the Human Environmental Studies Department. Courses to be selected in consultation with advisor and may be selected from fields such as industrial engineering, health sciences, art, education, marketing and management, or apparel.
Retention Standards
Upon admittance into the Accelerated Masters Degree Program (AMDP), students have the responsibility of continuing the completion of all course requirements for the university program and for their majors and minors on their bachelor's degree. Upon matriculation into the AMDP, an overall GPA of at least 3.0 is required throughout the graduate curriculum.

Sample Dual-Degree Curriculum

**Year Four (Fall)**
- One 500-level or one 600-level required on the APDMT program* (3)
- FMD 550* (3)
- 9 hours of undergraduate credits not counted on the APDMT (9)

**Year Four (Spring)**
- Two 500-level required courses required on the APDMT program (6) or one 500-level required on the APDMT program and one 600-level required on the APDMT program* (6)
- 9 hours of undergraduate credits not counted on the APDMT (9)

**Year Five (Fall)**
- One Graduate Elective (3)
- One 600-level required on the APDMT program (3)
- Graduate course in Research Methods (3)

**Year Five (Spring)**
- Graduate Course in Research Statistics (3)
- One Graduate Elective (3)

**Year Five (Summer)**
- FMD 798 Thesis or FMD 635 Advanced Internship (6)

*Courses that may be counted on the undergraduate and graduate degrees.

Master of Science (M.S.) in Nutrition and Dietetics

**Minimum Totals for Graduation: 31 - 37 hours**

The M.S. in Nutrition and Dietetics is designed to provide advanced training in nutritional sciences for new and experienced professionals. Its objectives are to enhance the graduate's knowledge base and expertise in the continually advancing field of nutrition and clinical dietetics and to provide graduates with the quantitative and methodological knowledge necessary to better interpret the scientific literature and nutritional research.

The M.S. in Nutrition and Dietetics Program course work can be completed entirely through distance and distributed learning. The program utilizes web-based technology to provide course content. This degree program has three options:

- Option I - Plan A Thesis Option;
- Option II - Plan B Internship Option;
- Option III - Plan C Course Work Option.

**Admission Requirements, Retention & Termination Standards**

**Admission Requirement Snapshot**

- GPA: 3.0 (in the last 60 hours undergrad course work)
- Entrance Exam: N/A
- Internal Application Deadline: July 1 (Fall), Oct. 1 (Spring)

**See Admission Requirement Details Below**

1. An undergraduate grade point average of at least 3.0 (on a 4-point scale) in the last 60 semester hours of course work.
2. Successful completion of the requirements for dietetic registration by the Academy of Nutrition and Dietetics or fulfillment of the minimum academic requirements of the Didactic Program in Dietetics approved by the Academy of Nutrition and Dietetics’s Commission on Accreditation/Approval for Dietetics Education or successful completion of at least: two courses in nutrition, one being at the advanced level, and one course in each of the following: anatomy/physiology, biochemistry; microbiology; and organic chemistry.

(Continued)
3. An essay (2-3 pages, double-spaced) including a discussion of the applicant’s goals and how completion of the program will facilitate his or her achievement of those goals. A portion of this essay should focus upon the unique qualifications the student will bring to the degree program. In addition, the essay must include the student’s choice of options (I, II, or III, see program course listing). Also the student will provide a generalized description of the subject matter of the thesis (Plan A) if Option I is chosen or for Options II or III a description of the significant scholarship (e.g. project, extensive paper) the student intends to perform to meet the requirements for Plan B. This essay replaces the written statement requested as part of the application to the Office of Research and Graduate Studies. This essay replaces the written statement requested as part of the application to the Office of Research and Graduate Studies. This essay replaces the written statement requested as part of the application to the Office of Research and Graduate Studies.

4. Three (3) letters of recommendation from former professors or professionals in the field of nutrition and dietetics or other health-related professional.

5. Evidence of successful completion of an undergraduate statistics course is strongly recommended.

6. Per University policy, conditional admission may be considered for applicants with backgrounds or grade point average deficiencies. Courses taken to make up admission deficiencies may not be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all deficiencies.

7. Up to 15 semester hours of graduate credit may be transferred from another institution with approval of advisor.

8. Up to a total of 15 credit hours can be applied to the MS in Nutrition and Dietetics Program through Credit by Examination or transfer of course credits from another accredited institution pending approval of coursework.

Options
Select one of the following plans:

Option I - Plan A: Thesis Option (31 hours)
FNS 661 - Macronutrients 3(Spec)
FNS 662 - Micronutrients 3(Spec)
FNS 670 - Seminar: Nutrition 1-3(Spec)
FNS 672 - Advanced Clinical Nutrition 3(Spec)
FNS 673 - Advanced Nutritional Assessment 3(Spec)
FNS 677 - Nutritional Epidemiology 3(Spec)
FNS 678 - Research Methods in Nutrition 3(Spec)
FNS 698 - Thesis in Dietetics 1-6(Spec)

Plus an oral exam on the thesis topic and 6 additional hours of electives selected with the approval of the student’s academic advisor.

Note: FNS 670 and FNS 798 are variable credit courses. Students on this option are required to take 1 credit hour of 670 and 6 credit hours of 798.

Option II - Plan B: Internship Option (37 hours)
FNS 661 - Macronutrients 3(Spec)
FNS 662 - Micronutrients 3(Spec)
FNS 670 - Seminar: Nutrition 1-3(Spec)
FNS 672 - Advanced Clinical Nutrition 3(Spec)
FNS 673 - Advanced Nutritional Assessment 3(Spec)
FNS 674 - Dietetic Internship: Clinical Experience 5(Spec)
FNS 675 - Dietetic Internship: Foodservice Administration Experience 5(Spec)
FNS 676 - Dietetic Internship: Summary Experience 2(Spec)
FNS 677 - Nutritional Epidemiology 3(Spec)
FNS 678 - Research Methods in Nutrition 3(Spec)
FNS 790 - Independent Study in Dietetics 2-6(Spec)

Plus oral examination over course work and 3 additional hours of electives selected with the approval of the student’s academic advisor.

Note: FNS 670 and FNS 790 are variable credit courses. Students on this option are required to take 1 credit hour of FNS 670 and 3 credit hours of FNS 790.

In some cases, twelve credits may be earned through examination to substitute for the dietetic internship experience. Students must be eligible and must pass the examination to earn the twelve credits. Contact the Department of Human Environmental Studies for the policy on Credit by Examination for Dietetic Internship Experience.

Option III - Plan C: Course Work Option (33 hours)
FNS 661 - Macronutrients 3(Spec)
FNS 662 - Micronutrients 3(Spec)
FNS 670 - Seminar: Nutrition 1-3(Spec)
FNS 672 - Advanced Clinical Nutrition 3(Spec)
FNS 673 - Advanced Nutritional Assessment 3(Spec)
FNS 677 - Nutritional Epidemiology 3(Spec)
FNS 678 - Research Methods in Nutrition 3(Spec)
FNS 790 - Independent Study in Dietetics 2-6(Spec)

Plus oral examination over course work and 9 additional hours of electives selected with the approval of the student’s academic advisor.

Note: FNS 670 and FNS 790 are variable credit courses. Students in this program MUST enroll in FNS 670 three times (1 hour each) under different subject themes. For FNS 790, students are required to take 3 credit hours.

Total: 31-37 semester hours

Graduate Certificate in Nutrition and Dietetics

Minimum Totals for Graduation: 16 hours

Note: This certificate program is offered through CMU Online (CMU Global Campus) only.

The Graduate Certificate in Nutrition and Dietetics is designed to provide advanced training in clinical nutrition for new and experienced professionals. Its objectives are to enhance the graduate’s knowledge base and expertise in the continually advancing field of nutrition and clinical dietetics, to provide graduates with the knowledge necessary to better interpret the scientific literature in nutrition, and incorporate nutritional constructs into their professional practice. The Certificate in Nutrition and Dietetics Program course work can be completed entirely through distance and distributed learning.

The program utilizes web-based technology to provide course content.

Admission Requirements, Retention & Termination Standards

Successful completion of a baccalaureate degree from an accredited institution, in which at least one course in each of the following was completed: basic nutrition, biochemistry; physiology and statistics. A 3.0 minimum GPA is required in undergraduate and/or post baccalaureate course work for admission to the program.

Professional status in any health or scientific profession with advanced training. Must submit registration, certification, licensure, or other documentation of professional competency.

Core Courses (15 hours)

Select 5 courses from the following:
FNS 661 - Macronutrients 3(Spec)
FNS 662 - Micronutrients 3(Spec)
FNS 671 - Advanced Topics in Nutrition: Geriatrics 3(Spec)
FNS 672 - Advanced Clinical Nutrition 3(Spec)
FNS 673 - Advanced Nutritional Assessment 3(Spec)
FNS 674 - Dietetic Internship: Clinical Experience 5(Spec)
FNS 675 - Dietetic Internship: Foodservice Administration Experience 5(Spec)
FNS 676 - Dietetic Internship: Summary Experience 2(Spec)
FNS 677 - Nutritional Epidemiology 3(Spec)
FNS 678 - Research Methods in Nutrition 3(Spec)
FNS 679 - Advanced Topics in Nutrition: Obesity 3(Spec)

Required Course (1 hour)
FNS 670 - Seminar: Nutrition 1-3(Spec)

Total: 16 semester hours
Course Descriptions: FMD

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. Prerequisite: FMD 246, 358, or graduate status.

FMD 545 Introduction to Draping 3(2-2)
Interpretation of garment designs developed through the draping on dress forms. Prerequisites: FMD 241 and FMD 345 or graduate status.

FMD 546 Experimental CAD for Apparel 3(9-Spec)
Creative use of CAD software as applied to standards prevalent in the design, manufacture or presentation of apparel. May be taken for credit more than once if different software is being used; total credit not to exceed nine hours. Prerequisites: Permission of instructor.

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 560 Apparel Product Development 3(2-2)
Integration of merchandising and design functions through team-based and case-based study, and/or industry collaboration as a total process for apparel product development. Prerequisites: Signed major in Apparel Merchandising & Design with a concentration in Apparel Design or signed major in Apparel Merchandising & Design with a concentration in Apparel Merchandising. For Apparel Design concentration: FMD 246, 345, 355, 401; Pre/Co-requirement: FMD 550. For Apparel Merchandising Concentration: FMD 246, 355, 358, 401; Pre/Co-requirement: FMD 550. Or admission to College of Graduate Studies.

FMD 570 The Business and Design of European Fashion 3(Spec)
A short term (three weeks) faculty led study abroad program examining the business and design of European fashion including haute couture. Prerequisites: FMD 141, 256, minimum GPA of 2.5, and permission of instructor. Recommended: FMD 140.

FMD 597 Special Topics in Apparel Merchandising & 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.

FMD 604 Scholarship in Textiles and Clothing 3(3-0)
Overview of research in textiles and clothing with emphasis on current future directions of the field. Prerequisite: Enrollment in the Apparel Product Development and Merchandising Technology graduate program.

FMD 635 Advanced Internship in Textiles & Apparel 1-6(Spec)
A structured internship experience that fosters the application of advanced technology and creative skills in a textile/apparel professional setting. Prerequisites: 12 hours of graduate coursework in Apparel Product Development and Merchandising Technology.

FMD 640 Anthropometrics and Apparel 3(2-2)
Examination of human factors and their relationship to designed products. Quantification of body sizes and human variation using body scanning technology. Prerequisite: Admission to the Apparel Product Development and Merchandising Technology graduate program.

FMD 641 Apparel Presentation Technology 3(2-2)
Software applications specific to apparel presentation in retail and virtual environments. Emphasis on creation of pinograms for product display. Prerequisites: FMD 246. Admission to the Apparel Product Development and Merchandising Technology graduate program.

FMD 655 Textile Product Evaluation 3(2-2)
Appropriate selection, use, and adaptation of standardized tests for textile product evaluation, familiarity with technological advances; and exploration of innovative use of textiles. Prerequisites: Admission to the Apparel Product Development and Merchandising Technology graduate program.

FMD 656 Apparel Mill Technology 3(3-0)
In-depth study of the principal apparel retail technologies and systems currently being developed and used for internal retail management and for global supply chain management. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Apparel Product Development and Merchandising Technology graduate program.

FMD 697 Special Topics in Apparel Merchandising & 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.

FMD 790 Independent Study in Apparel Merchandising & Design 2-6(Spec)
Student-initiated study in an area not covered in regular courses guided by faculty or faculty committee. Prerequisites: Permission of instructor.

FMD 797 Special Topics in Apparel Merchandising & 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.

FMD 798 Thesis in Apparel Merchandising & Design 1-6(Spec)
Individual research or creative endeavor culminating in a written thesis and/or exhibition of work. CR/NC only. Prerequisites: Permission of instructor.

Course Descriptions: FNS

FNS 512 Food and Nutrition in Developing Countries and in Emergencies 3(3-0)
Nutritional issues of developing countries and in emergencies explored in depth, including assessment, prevention, and relief. This course may be offered in a hybrid or online format. Prerequisites: FNS 370, junior, senior or graduate status. Recommended: FNS 271.

FNS 560 Field Experience in International Nutrition 3(Spec)
Faculty-led study abroad course to acquire hands-on experience in the assessment, prevention and relief of nutritional and public health problems in developing countries. Prerequisite: FNS 370, minimum GPA of 2.5, age 18 years or older. Recommended: FNS 271, 512.

FNS 570 Nutritional Education 4(4-0)
Teaching strategies, advising techniques, resources, and motivational techniques as specifically applied to patients/clients in nutrition programs and patients/clients receiving nutrition services. Pre/Co-Requisite: FNS 471.

FNS 573 Field Work: Community Nutrition 3(Spec)
Consulting, teaching and supportive research experiences in the field with a nutritionally vulnerable group. Prerequisites: FNS 370 and FNS 570.

FNS 575 Geriatric Nutrition 3(3-0)
A detailed description of nutrition for the elderly, including special nutritional considerations, food selection patterns, nutritional status and strategies for disease prevention. Identical to GRN 575. Credit may not be earned in more than one of these courses. Recommended: FNS 370.

FNS 577 Advanced Topics in Nutrition: Eating Disorders 3(3-0)
Analysis of factors involved in etiology, assessment, medical consequences, treatment and prevention of eating disorders. Recommended: FNS 370. This course is approved for offering in a distance learning format.

FNS 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.

FNS 661 Macronutrients 3(3-0)
Advanced study of nutrition, metabolism, and function of proteins, carbohydrates and lipids as related to human health and disease. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 662 Micronutrients 3(3-0)
Advanced study of the nutrition, metabolism, and function of vitamins and minerals as related to human health and disease. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 670 Seminar: Nutrition 1-3(Spec)
Student review and presentation of specific topics of current research in nutrition. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 671 Advanced Topics in Nutrition: Geriatrics 3(3-0)
Presents key concepts in geriatric nutrition. Provides students with skills needed to evaluate and utilize information regarding nutrition in health and disease among the elderly. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 672 Advanced Clinical Nutrition 3(3-0)
Advanced concepts of diet therapy and care for a variety of clinical disorders with nutritional implications. Includes coverage of enteral and parenteral nutrition. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 673 Advanced Nutritional Assessment 3(3-0)
Provides techniques for nutritional assessment of individuals and groups: evaluation of dietary intake, anthropometry, nutritional analysis software, and biochemical, and clinical indices. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 674 Dietetic Internship: Clinical Experience 5(Spec)
Application of dietary principles to human pathophysiologic status through documenting and counseling individuals, assessing, educating groups, and planning in an acute care environment. Prerequisites: registration is restricted to students accepted into the Michigan University Dietetic Internship and the College of Graduate Studies. In some cases, 12 credits may be earned through examination to substitute for the dietetic internship experience.
FNS 675 Dietetic Internship: Foodservice Administration Experience 5(Spec)
Application of administrative principles (budget decisions, cost containment, personnel management, leadership) involved in the production, distribution, and service of food in hospitals and schools. Prerequisites: Registration is restricted to students accepted into the Central Michigan University Dietetic Internship and the College of Graduate Studies. In some cases, 12 credits may be earned through examination to substitute for the dietetic internship experience.

FNS 676 Dietetic Internship: Summary Experience 2(Spec)
Integration and application of clinical, foodservice, and community nutrition principles and their implementation in acute care settings. Prerequisites: FNS 674 and FNS 675; registration is restricted to students accepted into the Central Michigan University Dietetic Internship and the College of Graduate Studies. In some cases, 12 credits may be earned through examination to substitute for the dietetic internship experience.

FNS 677 Nutritional Epidemiology 3(3-0)
Presents key concepts of nutritional epidemiology. Enables students to evaluate clinical research investigating the role of nutrition in disease causation and health promotion. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 678 Research Methods in Nutrition 3(3-0)
Students will review research methods, read and analyze related literature and develop a proposal for practice-oriented nutrition research. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 679 Advanced Topics in Nutrition: Obesity 3(3-0)
Current theories and analysis of factors contributing to overweight and obesity throughout the lifespan; intervention and weight management options presented. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 697 Special Topics in Dietetics 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.

FNS 790 Independent Study in Dietetics 2-6(Spec)
Student-initiated study in an area not covered in regular courses guided by faculty or faculty committee. Prerequisites: FNS 678.

FNS 797 Special Topics in 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.

FNS 798 Thesis in Dietetics 1-6(Spec)
Individual research or creative endeavor culminating in a written thesis and/or exhibition of work. CR/NC only. Prerequisites: FNS 678.

Course Descriptions: GRN
GRN 575 Geriatric Nutrition 3(3-0)
A detailed description of nutrition for the elderly, including special nutritional considerations, food selection patterns, nutritional status and strategies for disease prevention. Identical to FNS 575. Credit may not be earned in more than one of these courses. Prerequisites: FNS 370.

GRN 590 Independent Study 1-4(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.

GRN 631 Gerontology: Theory and Practice 3(3-0)

GRN 632 Public Policy and Aging 3(3-0)
Course addresses the development of social policy in the context of population aging. Emphasizes analysis of current and long-term implications on policy decisions. Prerequisite: graduate status.
Course Descriptions: HDF

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 Learning Environments 3(3-0)
The functional role of the early childhood program director: legal and administrative controls and creative learning environments will be explored. Prerequisites: HDF 302, 303 and 309; or graduate admission.

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. Prerequisites: Two of: HDF 302, 303, 306, 308; or Human Development and Family Studies graduate standing.

HDF 511 Seminar in Human Sexuality 3(3-0)
Survey of professional literature pertaining to human sexuality. Prerequisites: HDF 213 or HSC 222.

HDF 513 Readings in the Family 3(3-0)
Survey of professional literature related to the family. Prerequisites: HDF 211 or HDF 411 or SOC 411.

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. Prerequisites: HDF 100 or PSY 220; HDF 211 or HDF 411 or SOC 411.

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 & 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. Prerequisite: See Course Search and Registration.

HDF 600 Professional Seminar I-Introduction to HDFS 1(1-0)
This course introduces students to the foundational concepts and principles involved in theory, research, and practice with individuals and families across the lifespan.

HDF 601 Human Growth and Development: 0-8 Years 3(3-0)
Growth and development of normal children ages 0-8 years. Major developmental processes and their educational and social implications will be emphasized.

HDF 602 Professional Seminar II - Diversity in HDFS 1(1-0)
This course introduces students to historical and contemporary diversity and inclusion issues and models used in HDFS theorizing and practice. Prerequisite: HDF 600.

HDF 603 Human Diversity Within and Between Families 3(3-0)
Diverse backgrounds of families/individuals based on ethnicity, religion, sexual orientation, class, and disabilities will be studied. Models to explore the diverse nature will be applied. Identical to SOC 611. Credit may not be earned in more than one of these courses.

HDF 604 Professional Seminar III - Grant Writing in HDFS 1(1-0)
The course teaches students how to locate, develop, and write grants applicable to research, non-profit agencies, and programs. Prerequisites: HDF 602, 630.

HDF 606 Human Growth and Development: Issues in Adolescent Development 3(3-0)
Research and theory relating to the adolescent as a member of family and society. Prerequisite: HDF 306.

HDF 609 Application of Theory and Research in Human Development 3(3-0)
This course explores contemporary issues and theory to understand and explain human development with an emphasis on the diversity of humans across the lifespan. Pre/Co-requisite: HDF 600.

HDF 615 Application of Theory and Research in Family Studies 3(3-0)
This course explores core issues in family studies and presents historical and contemporary theoretical frameworks used to understand and explain family life.

HDF 618 The Family Life Cycle: The Older Adult 3(3-0)
Study of the older adult in terms of the nutritional, social, consumer and familial aspects of development.

HDF 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

HDF 630 Applied Research Methods 3(3-0)
This course introduces students to the quantitative, qualitative, and mixed methods used when conducting research within an interdisciplinary context in the human services. Prerequisite: Graduate standing. Recommended: An undergraduate course in research methods; an undergraduate course in statistics.

HDF 635 Skill Mentorship in HDFS: Teaching 1(Spec)
Applied directed study course in which students work closely with a faculty mentor. Mentorship focuses on the development of teaching skills. Prerequisite: Admission to the graduate program in Human Development and Family Studies.

HDF 636 Skill Mentorship in HDFS: Research 1(Spec)
Applied directed study course in which students work closely with a faculty mentor. Mentorship focuses on development of research skills. Prerequisite: Admission to the graduate program in Human Development and Family Studies.

HDF 637 Skill Mentorship in HDFS: Practice 1(Spec)
Applied directed study course in which students work closely with a faculty mentor. Mentorship focuses on the development of professional practice skills. Prerequisite: Admission to the graduate program in Human Development and Family Studies.

HDF 640 Practice in Human Services 3(3-0)
This course presents a review and analysis of historical and contemporary services for children, adults, and families with a particular emphasis on skills and ethics. Prerequisite: Admission to the HDFS graduate program.

HDF 642 Program Development and Evaluation in Human Services 3(3-0)
This course addresses advanced components of program development and evaluation in the human services field. Prerequisite: Admission to the HDFS graduate program.

HDF 668 Practicum I in HDFS 3(Spec)
This course is an initial practicum in the HDFS Master’s Program and is a human services related occupational experience with supervision by individual faculty. Prerequisites: HDF 600, completion of at least 12 credits in the HDFS graduate program.

HDF 668 Practicum II in HDFS 3(Spec)
This course is an advanced practicum in the HDFS Master’s Program and is a human services related occupational experience with supervision by individual faculty. Prerequisite: HDF 668.

HDF 679 Special Topics in Human Development & 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.

HDF 686 Occupational Field Experience 3(Spec)
Internship in one human development and family related occupation with supervision by individual faculty. CR/NC only. Prerequisite: HDF 600, 9 hours of graduate level course credit and permission of instructor.

HDF 797 Special Topics in Human Development & 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.

HDF 798 Thesis in Human Development & Family Studies 1-6(Spec)
Individual research or creative endeavor culminating in a written thesis and/or exhibition of work. CR/NC only. Prerequisite: Permission of instructor.

HDF 799 Plan B Project in Human Development and Family Studies 3(3-0)
Individual research or creative endeavor culminating in a Plan B project. CR/NC only. Prerequisite: Admission to the graduate program in HDFS; Permission of Plan B Committee based on approval of Plan B proposal.
Department of Journalism
(JRN)
College of Communication and Fine Arts

Jiafei Win, Chairperson
454 Moore Hall, (989) 774-3196

Sean Baker, Ph.D., Visual/Digital Communication, Research
Tim Boudreau, Ph.D., Press and Society, Research
Lori F. Brost, Ph.D., Press and Society, New Media, Electronic Media, Pop Culture, Research
Elina Erzikova, Ph.D., Public Relations, Research
John K. Hartman, Ph.D., Press and Society, Research, Advertising, Public Relations
Sara Kubik, Ph.D., Visual/Digital Communication, Electronic Media, Research
Kenneth McDonald, B.A., Graphic Design, Visual Communication
Carol McGinnis, M.A., Advertising, Multimedia, Press and Society, Research
Kent Miller, M.A., Photojournalism
Richard Ren, Ph.D., Integrative Public Relations, Research
Edgar Simpson, Ph.D., Public Affairs Reporting, Research
Johnny Sparks, Ph.D., Advertising, Research
Alice A. Tait, Ph.D., AHANA (African American, Hispanics, Asians, Native Americans)/Women and Mass Media, Mass Communication Theory and Research, Interpersonal and Public Communication
James Wojcik, M.A., Public Relations
Jiafei Yin, Ph.D., News Editorial, Media History and International Communications, Research

Graduate-level courses offered by the Department of Journalism may be appropriate as electives on various graduate degree curricula.

Course Descriptions: JRN

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 516 Public Affairs Reporting 3(3-0)
Coverage of government and other public issues. May be offered as 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 551 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. Prerequisites: JRN 350.

JRN 556 Public Relations Seminar 3(3-0)
Practical applications of public relations principles in a diverse society. Prerequisites: JRN 350, 450.

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.

JRN 670 Public Relations Management 3(3-0)
Organization and management of the public relations function in business, industry, various institutions and public relations firms: counseling, planning, budgeting, personnel management. This course is approved for offering in a distance learning format.
Department of Management  
(MGT)  
College of Business Administration

Luis Perez, Chairperson  
200 Smith Hall, (989) 774-3450

Mahmood S. Bahaee, Ph.D., Management and Business Policy  
Lawrence O. Jenicke, Ph.D., Management Science, Production/Operations Management

Hyungu Kang, Ph.D., Management Policy and Strategy  
Kevin G. Love, Ph.D., Human Resource Management  
Alexandra MacDougall, Ph.D., Human Resource Management  
Van Miller, Ph.D., International Business  
Michael J. Pisani, Ph.D., International Business  
Luis A. Perez-Batres, Ph.D., Strategic Management, International Business  
Syed Shahabuddin, Ph.D., Production/Operations Management, and Management Science  
Tomas Thundiyil, Ph.D., Human Resource Management  
Vincent WhiteLock, Ph.D., Operations Management; Supply Chain Management

Master of Business Administration (MBA)  
See the College of Business Administration for information.

Course Descriptions: MGT

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 Professional Business Studies or listed on signed 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 Professional Business Studies or listed on signed 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 Professional Business Studies or listed on signed major or minor.

MGT 533 Purchasing Strategy 3(3-0)  
Strategic analysis and planning of purchasing and supplier-base development for both domestic and global competitive environments. Prerequisites: MGT 333 and admission to Professional Business Studies or listed on signed major or minor or permission of the MBA Director.

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 Professional Business Studies or listed on signed major or minor or graduate standing.

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 Professional Business Studies or listed on 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 Professional Business Studies or listed on signed 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 transcript. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.
Department of Marketing and Hospitality Services
Administration (HSA, MKT)

College of Business Administration

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 is approved for offering in a distance learning format. Prerequisites: one course in MKT; one course in statistics or MKT 450; admission to Professional Business Studies; 86 semester hours completed.

MKT 560 International Marketing 3(3-0)
Policies and practices employed in international business. Considers problems of international payments, trade and investment with special emphasis on integrating managerial dimensions with related economic principles. Prerequisites: MKT 300 or MKT 304; admission to Professional Business Studies; senior standing; 86 semester hours completed. This course is approved for offering in a distance learning format.

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.

MKT 631 Lean Logistics Operations 3(3-0)
Understanding and applying lean principles to logistics operations by examining and improving the order fulfillment process including; order, inventory, warehousing and transport operations. This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of MBA director.

MKT 632 Integrated Logistics Strategy 3(3-0)
Current best practices and strategies for designing and managing integrated logistics systems. This course is approved for offering in a distance learning format. Prerequisites: Admission to the MBA program or permission of the MBA director.

MKT 633 Risk-based Logistics Networks 3(3-0)
Current best practices and strategies for assessing and designing risk-based logistics networks with emphasis on risk management including logistics network security and green initiatives. This course is approved for offering in a distance learning format.

MKT 650 Marketing Research: Managerial Applications 2(2-0)
Survey of what managers need to know about marketing research. Includes questionnaire design, evaluation; sampling and sample size issues, and basic methods of data analysis. Prerequisites: MKT 300 and admission to the MBA program or graduate status and permission of the MBA director.

MKT 663 Product Management 2(2-0)
Development and introduction of new products and services in a dynamic environment. Prerequisites: regular admission to the MBA program or permission of the MBA director.

MKT 664 Promotional Strategy 2(2-0)
Promotional strategy is designed to present the relevant concepts of the marketing communication process and their applications within a managerial framework. Prerequisite: regular admission to the MBA program or permission of the MBA director.

MKT 698 The Logistics Project 4(4-0)
The capstone experience where skills and competencies are applied to actual logistics management problems. Students develop logistics solutions with the guidance of a faculty advisor. This course may be offered in an online or hybrid format. Prerequisites: Completion of two of the following: MKT 555, 631, 632, 633. Admission to the MBA program or permission of the MBA director.

MKT 791 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Prerequisites: permission of instructor and department chairperson and 15 hours of graduate credit in M.B.A. program.

MKT 797 Special Topics 3-6(Spec)
Enables students to take various topics under the same number. Specific topic will be listed on the student’s transcript. Prerequisites: graduate status and permission of instructor.

MKT 798 Thesis 1-6(Spec)
An acceptable thesis in business administration. The thesis is directed by a committee in conformity with the “Regulations and Directions for the Writing of the Master’s Thesis.” CR/NC only.

Course Description: HSA

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 Professional Business Studies or listed on signed 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. Prerequisites: HSA 350, 447; 86 semester hours completed; admission to Professional Business Studies, listed on signed 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 Professional Business Studies and senior standing; 86 hours completed.

HSA 791 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Prerequisites: permission of instructor and department chairperson and 15 hours of graduate credit in MBA program.

HSA 797 Special Topics 3-6(Spec)
Enables students to take various topics under the same number. Specific topic will be listed on the student’s transcript. Prerequisites: graduate status and permission of instructor.

HSA 798 Thesis 1-6(Spec)
CR/NC only.
Classes are small, allowing students to receive individual attention. An active colloquium program draws speakers with varied research interests from a wide range of locales. A graduate student seminar gives students the opportunity to explore topics that extend the required coursework. The applied mathematics group’s specialty is computational and polymer fluid dynamics. Research groups have strong links with science and engineering departments within Central Michigan University, other universities and industry.

Computing facilities within Pearce Hall, where the department is located, include microcomputer laboratories with Macintosh and PC computers.

Two types of financial aid are available: graduate fellowships and graduate teaching assistantships. Some of these are specified for doctoral students and carry a higher stipend. A limited number of graduate research assistantships may be available, and are dependent on current grant funding. Additional support is available for members of under-represented minority groups.

Completed applications for fellowships are due February 15. Completed applications for assistantships must be submitted by February 15, although late applications may be considered if positions are available.

Master of Arts (M.A.) in Mathematics

Minimum Totals for Graduation: 30 hours

The M.A. degree has an emphasis in the more computational aspects of mathematics for students who are interested in jobs in business, industry and government. The degree program also retains the flexibility to prepare students for teaching mathematics at the undergraduate level or to undertake doctoral work in mathematics.

The requirements are those that a student with minimal undergraduate preparation would need to fulfill.

Any student having satisfied any of the course requirements prior to entering the program may be excused from that course requirement. However, the 30-hour requirement will not be affected.

If the student elects to write a thesis, it shall be in mathematics. If a student elects to follow non-thesis Plan B, two projects in two fields of mathematics must be completed under the direction of graduate faculty. More detailed information is available in the department office.

Admission Requirements, Retention & Termination Standards

Admission Requirements Snapshot

| GPA: 2.7 (and 2.7 in major) |
| Entrance Exam: GRE Recommended |
| Internatl Application Deadline: July 1 (Fall), Oct.1 (Spring) |

Admission is dependent upon a student having completed a minimum of 20 semester hours of mathematics including MTH 233 (Calculus III) or its equivalent, and one course in either linear or abstract algebra. A grade point average of 2.7 overall and a 2.7 in mathematics are required. Applicants must submit three letters of recommendation directly to the Mathematics Department and complete CMU Graduate Studies application. General GRE scores are required for students who are applying for a Graduate Assistantship or Fellowship.

Degree Requirements

Algebra Requirements (6 hours)

MTH 525 - Modern Algebra II 3(3-0)
MTH 623 - The Theory of Groups 3(3-0)

Analysis Requirements (9 hours)

MTH 533 - Advanced Calculus II 3(3-0)
MTH 632 - Introduction to Real Analysis and Its Applications 3(3-0)
MTH 636 - Introduction to Complex Variables 3(3-0)

Department of Mathematics (MTH, STA)

College of Science and Technology

En-Bing Lin, Chairperson
214 Pearce Hall, 989-774-3596
https://centrallink.cmich.edu/academics/sci_tech/math

Carl Lee, Graduate Coordinator
109 Pearce Hall, 989-774-3555

Mohamed Amezziane, Ph.D., University of Central Florida, statistics
James Angelos, Ph.D., Montana State University, approximation theory
Ahmed Assaf, Ph.D., Technion University, combinatorics
Debraj Chakrabarti, Ph.D., University of Madison-Wisconsin, Analysis
C-Y. Jean Chan, Ph.D., University of Utah, commutative algebra and algebraic geometry
Chin-I Cheng, Ph.D., University of Missouri-Columbia, statistics
Kahadawala Cooray, Ph.D., University of Nevada at Las Vegas, statistics
John Daniels, Ph.D., Western Michigan University, statistics
Lisa DeMeyer, Ph.D., University of north Carolina at Chapel Hill, differential geometry
Ana Dias, Ph.D., Indiana State University, mathematics education
Donna Erickson, Ph.D., Michigan State University, mathematics education
Felix Famoye, Ph.D., University of Calgary, statistics
Martha Frank, Ph.D., Purdue University, mathematics education
Sidney W. Graham, Ph.D., University of Michigan, number theory
George Grossman, Ph.D., University of Windsor, applied mathematics
Yeonghyang Kim, Ph.D., University of Wisconsin, analysis and approximation theory
Douglas Lapp, Ph.D., The Ohio State University, mathematics education
Carl Moun-Shen Lee, Ph.D., Iowa State University, statistics
En-Bing Lin, Ph.D., Johns Hopkins University, applied and computational mathematics
Meera Mainkar, Ph.D., Tata Institute of Fundamental Research, geometry, nilmanifolds
Tibor Marcinek, Ph.D., Comenius University, mathematics education
Sivaram K. Narayan, Ph.D., Purdue University, operator theory
Sing-Cheong Ong, Ph.D., Dalhousie University, operator theory
Christine M. Phelps, Ph.D., University of Delaware, mathematics education
Katrina Piatek-Jimenez, Ph.D., University of Arizona, mathematics education
Leela Rakesh, Ph.D., Kanpur University, applied mathematics
Brad Safnuk, Ph.D., University of California, Davis, geometry and topology
Benjamin Salisbury, Ph.D., University of Connecticut, algebraic combinatorics
Jungsywan Sepanski, Ph.D., Texas A&M University, statistics
Dennis St. John, Ph.D., University of Iowa, mathematics education
Daniel X. Wang, Ph.D., The University of Alabama, applied statistics
Mingyang Yang, Ph.D., The University of New Mexico, statistics
Xiaoming Zheng, Ph.D., University of California at Irvine, applied mathematics

The Department of Mathematics offers the Master of Arts (M.A.) in Mathematics, which also offers an Accelerated Program; the Master of Science (M.S.) in Applied Statistics; and the Ph.D. in Mathematics with a concentration in the Teaching of College Mathematics.

The department has an active faculty with particular research strengths in the areas of algebra, algebraic geometry, applied mathematics, approximation theory, combinatorics and graph theory, differential geometry, functional analysis and operator theory, mathematics education, number theory, and statistics.

(Continued)
Computational Mathematics Requirement (3 hours)
Select one of the following:
MTH 520 - Optimization Theory 3(3-0)
MTH 534 - Applied Mathematics and Differential Equations 3(3-0)
MTH 578 - Combinatorics I 3(3-0)
MTH 638 - Theoretical Numerical Analysis 3(3-0)

Perspectives in Math Requirement (3 hours)
Select one of the following:
MTH 673 - History of Advanced Mathematics 3(3-0)
MTH 761 - Methods for Teaching College Mathematics 3(3-0)

Statistics Requirement (3 hours)
Any Statistics course offered by the mathematics department numbered STA 500 or higher.

Research Requirements (6 hours)
Select either plan A or plan B.

Plan A (6 hours)
Completion of a thesis, including an oral examination over the thesis.
MTH 798 - Thesis 1-6(Spec)

Plan B (6 hours)
Required Courses (3 hours)
1 hour of MTH 693, plus 1 hour of MTH 698 for Plan B paper 1, and 1 hour of MTH 698 for Plan B paper 2:
MTH 693 - Graduate Seminar in Mathematics and Its Applications 1-4(Spec)
MTH 698 - Plan B Project 1-2(Spec)
Electives (3 hours)
Electives may be chosen from any graduate level course and may be selected from a department other than mathematics. Electives must be chosen with approval of the advisor.

Total: 30 semester hours

ACCELERATED MASTER OF ARTS IN MATHEMATICS
Advanced undergraduate students majoring in mathematics may want to consider an option by which they can obtain their Bachelor of Arts or Bachelor of Science in Mathematics and their Master of Arts in Mathematics in five years. The accelerated program requirements are identical to the Major in Mathematics and to the Master of Arts in Mathematics, but allow the student to apply 12 credit hours of graduate coursework toward both the Bachelor of Arts or the Bachelor of Science and the Master of Arts degrees.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
To be eligible for the accelerated program, a student must have completed a minimum of 20 semester hours of mathematics including MTH 233 (Calculus III) or its equivalent, and one course in either linear or abstract algebra. A grade point average of 3.0 overall and a 3.0 in mathematics are required. In addition, students must have completed MTH 332 or its equivalent with a letter grade of at least B and must have completed at least 90 credit hours of undergraduate coursework, including all competency requirements and all but 12 credit hours of University Program requirements.

Degree Requirements
During the fourth year, students will complete MTH 632 or MTH 636, MTH 525, 533, 623 to be counted toward both the undergraduate and graduate degrees. Students will complete the Bachelor of Arts or Bachelor of Science degree requirements by the end of the summer term of the fourth year. Students will complete the coursework for the Master of Arts and complete either the Plan A or Plan B option by the end of the summer term of their fifth year.

A sample curriculum for a student who has completed 90 credit hours of undergraduate coursework is given below.

Year 4 - Fall (15 hours)
Undergraduate Courses (9 hours), plus 3 hours each of MTH 525 and 632:
MTH 525 - Modern Algebra II 3(3-0)
MTH 632 - Introduction to Real Analysis and Its Applications 3(3-0)

Note: MTH 525 and 632 apply to both the BA/BS and MA degrees. Students must register for graduate credit in these courses.

Year 4 - Spring (15 hours)
Undergraduate courses (9 hours), plus 3 hours each of MTH 533 and MTH 623.
MTH 533 - Advanced Calculus II 3(3-0)
MTH 623 - The Theory of Groups 3(3-0)

Note: MTH 533 and 623 apply to both the BA/BS and MA degrees. Students must register for graduate credit for these courses.

Year 4 - Summer (4 hours)
Undergraduate courses up to 4 hours.
(BA or BS degree conferred.)

Year 5 - Fall (7-9 hours)
• For Plan B, 1 hour of MTH 698.
• For Plan A, 6 hours of MTH 798 over two semesters.
MTH 636 - Introduction to Complex Variables 3(3-0)
MTH 698 - Plan B Project 1-2(Spec)
MTH 798 - Thesis 1-6(Spec)

Year 5 - Spring (6-8 hours)
Computational/Perspective (3 hours), plus:
• For Plan B, a Plan B elective (3 hours), and 1 hour each of MTH 693 and 698.
• For Plan A, students must complete 6 hours of MTH 798 over the course of two semesters.
MTH 693 - Graduate Seminar in Mathematics and Its Applications 1-4(Spec)
MTH 698 - Plan B Project 1-2(Spec)
MTH 798 - Thesis 1-6(Spec)

Year 5 - Summer (3 hours)
Computational Mathematics Requirement or Perspectives in Mathematics Requirement (3 hours)
(M.A. degree conferred)
Ph.D. in Mathematics with a concentration in the Teaching of College Mathematics

Minimum Totals for Graduation: 90 hours

The Ph.D. degree is designed to develop well-prepared teachers of college mathematics who combine knowledge and skill in mathematics with a desire to teach it effectively. Coursework is broadly distributed across the various areas of mathematics and, in combination with a dissertation in mathematics, statistics, or in collegiate mathematics or statistics education, prepares students with a breadth and depth of mathematics knowledge that is well suited for teaching college mathematics and doing independent research in their areas of expertise. The pedagogical component of the program includes two required courses plus an internship.

Admission Requirements, Retention & Termination Standards

<table>
<thead>
<tr>
<th>Admission Requirement Snapshot</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA: 2.7 (see Item 2 below)</td>
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<tr>
<td>Application Deadline: February 15 for full consideration</td>
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</tbody>
</table>

Admission

1. Applicants must meet all CMU Graduate Studies admission requirements. International students should take note of any special admission considerations required by the Office of Research and Graduate Studies, including TOEFL requirements.

2. Applicants with a Bachelor's degree must have successfully completed 20 semester hours of mathematics including Multivariate Calculus (equivalent to MTH 233), Abstract Algebra (equivalent to MTH 523), and Advanced Calculus (equivalent to MTH 532). A minimum GPA of 2.7 overall (or 3.0 in the final sixty semester hours of graded coursework toward the bachelor's degree) and 3.0 in mathematics is required.

3. Applicants with Master's degrees in mathematics equivalent to the M.A. degree at Central Michigan University must have a minimum GPA of 3.0 in their graduate work.

4. Applicants must submit general GRE examination scores (the GRE requirement may be waived by the Department in exceptional cases) and three letters of recommendation directly to the Department of Mathematics.

5. Full consideration is guaranteed for applicants who submit all materials before February 15.

Both admission to the program and awards of Graduate Assistantships and Fellowships are competitive, with evaluation based on the nature of previous coursework, grades, general GRE scores, and letters of recommendation.

Program Requirements

Successful completion of the Ph.D. requires a minimum of 90 semester hours of graduate work beyond the bachelor's degree or 60 hours of graduate work beyond the master's degree. In order to obtain the Ph.D. degree the student must have a GPA of 3.0 (B) or better. A student with a bachelor's degree must have earned at least 50 of the total 90 hours at the 600 level or above. Those entering with a master's degree must have earned at least 35 of the 60 hours at the 600 level or above. At least 15 of the last 30 hours must be earned at the 700 level or above, excluding the dissertation and the internship credits.

Coursework

The program requires a minimum of 69 hours of coursework exclusive of internship and the dissertation credit beyond the bachelor's degree or 39 hours of such coursework after the master's degree. These hours are distributed among core courses and courses in area of specialization as given below. The minimum hours that are required in each category is specified in parentheses. An advisor will assist a student in the selection of the courses. Courses in which a student earns or has earned a grade below C (2.0) do not count toward meeting any graduate degree requirements.

Any student having satisfied any of the course requirements prior to entering the program may be excused from that course requirement. For this to be approved, the student must complete the Course Requirement Waiver Form supplied by the department. However, the total hour requirement of 69 (or 39) semester hours will not be affected.

A. Core Courses I - Algebra (9 hours)

- MTH 525 - Modern Algebra II 3(3-0)
- MTH 623 - The Theory of Groups 3(3-0)
- MTH 625 - Theory of Associative Rings 3(3-0)

B. Core Courses II - Analysis (9 hours)

- MTH 632 - Introduction to Real Analysis and Its Applications 3(3-0)
- MTH 633 - Real Variables 3(3-0)
- MTH 636 - Introduction to Complex Variables 3(3-0)
- MTH 637 - Complex Variable Theory 3(3-0)

Note: You may select either MTH 633 or 637, but not both, to meet the Core Course requirement.

C. Core Courses III - Mathematics Education (6 hours)

- MTH 761 - Methods for Teaching College Mathematics 3(3-0)
- MTH 762 - A Survey of Research in Collegiate Mathematics Education 3(3-0)

Core Electives (21 hours)

Students must select 21 hours from areas D-I. Students must choose courses from at least four different core elective areas, and at least two courses must be from the same area.

D. Core Electives I - Applied Mathematics

- MTH 520 - Optimization Theory 3(3-0)
- MTH 534 - Applied Mathematics and Differential Equations 3(3-0)
- MTH 634 - Fourier Analysis 3(3-0)
- MTH 638 - Theoretical Numerical Analysis 3(3-0)

E. Core Electives II - Combinatorics

- MTH 578 - Combinatorics I 3(3-0)
- MTH 678 - Combinatorics II 3(3-0)

F. Core Electives III - Theoretical Statistics

- STA 584 - Mathematical Statistics I 3(3-0)
- STA 684 - Theory of Statistical Inference 3(3-0)

G. Core Electives IV - Applied Statistics

- STA 580 - Applied Statistical Methods I 3(3-0)
- STA 590 - Applied Statistical Methods II 3(3-0)
- STA 682 - Linear Models 3(3-0)

H. Core Electives V - Topology and Geometry

- MTH 644 - Differential Geometry 3(3-0)
- MTH 645 - Topology 3(3-0)

I. Core Electives VI - History

- MTH 673 - History of Advanced Mathematics 3(3-0)

J. Other Electives (3-9 hours)

Students who have not had a course equivalent to MTH 533 prior to entering the Ph.D. program are required to take MTH 533 as one of their electives.

Elective courses can be from outside the Department of Mathematics. These elective courses are to be selected by each student in consultation with his/her advisor or dissertation supervisor.

K. Area of Specialization (15-21 hours)

Each student, in consultation with his/her dissertation supervisor, will select at least 15 semester hours of courses in the area of specialization.

These courses can be from outside the Department of Mathematics. The areas of specialization include the following: Algebra, Applied Mathematics, Approximation Theory, Combinatorics, Functional Analysis, Mathematics Education, Number Theory, Operator Theory, and Statistics.

(Continued)
Qualifying Examination

In the Ph.D. qualifying examinations, students are expected to demonstrate a broad knowledge of the topics and be able to integrate concepts and explain them at an appropriate level. Qualifying Examinations will be offered in the following areas, based on the material in the courses listed in the current Department of Mathematics' Graduate Student Handbook.
1. Algebra
2. Analysis
3. Applied Mathematics
4. Applied Statistics
5. Combinatorics
6. Mathematics Education
7. Theoretical Statistics
8. Topology

Each doctoral student must pass three examinations in three different areas from those listed above.

- Students planning to write a dissertation in pure or applied mathematics must pass examinations in algebra, analysis, and one other area listed above.
- Students planning to write a dissertation in statistics must pass examinations in theoretical statistics, applied statistics, and analysis.
- Students planning to write a dissertation in mathematics education must pass examinations in mathematics education and two other areas listed above, at least one of which must be algebra or analysis.

Students are strongly encouraged to take the examinations as soon as possible. Full-time students must pass at least one examination before the end of their fifth semester (fourth semester for students who entered the Ph.D. program with a master's degree in mathematics or statistics), and have exams in three areas passed before the end of their eighth semester (sixth semester for students who entered the Ph.D. program with a master's degree in mathematics or statistics). Part-time students may request additional time from the department. A maximum of three attempts in each area are allowed. A third failure in one area eliminates a student from the Ph.D. Program.

Internship (6 hours)

Students are required to teach two courses in mathematics/statistics at the 200 level or above under the supervision of a graduate faculty member in the Department of Mathematics. The student must earn the credits by registering for MTH 766.

MTH 766 - Internship: College Teaching 3-6(Spec)

Dissertation (15 hours)

Upon successful completion of the qualifying examinations, the student will select a dissertation supervisor. A dissertation supervisor must be a graduate faculty member in the Mathematics Department. The student will form a dissertation committee in consultation with the dissertation supervisor. This dissertation committee will be chaired by the supervisor(s) and must include at least two other graduate faculty members. Two members of the dissertation committee must be from the Mathematics Department. A completed doctoral dissertation must be approved by the dissertation committee, and by the Office of Research and Graduate Studies.

Students are required to register for 15 hours of MTH 898 (Dissertation).

The dissertation must consist of original work and can combine scholarly, analytical, creative and expository skills. It could consist of research on a topic in mathematics, an expository or historical examination of a piece of mathematics, or research on a topic related to the teaching of collegiate mathematics. Before starting the dissertation work, the project to be undertaken must be approved by the dissertation committee, and by the Office of Research and Graduate Studies.

Upon completion of coursework, qualifying examination, internship, and dissertation, the candidate for the Ph.D. degree must pass a final oral examination which is a dissertation defense in a colloquium format. The student's dissertation committee determines whether the student passes the examination.

The dissertation must be prepared according to the regulations prescribed in the Office of Research and Graduate Studies' most recent edition of the Preparation Guide to Doctoral Dissertations, Theses, Field Studies, and Plan B Papers and must be submitted to Dissertations Abstracts International.

MTH 898 - Dissertation 1-30(Spec)

Total: 90 semester hours

Master of Science in Applied Statistics and Analytics

Minimum Totals for Graduation: 30 - 36 hours

<table>
<thead>
<tr>
<th>ADMISSION REQUIREMENTS</th>
<th>RETENTION &amp; TERMINATION STANDARDS</th>
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<tbody>
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<td>GPA: 3.0</td>
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<tr>
<td>Application Deadline:</td>
<td>See page 25.</td>
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<tr>
<td>See Admission Requirement Details Below</td>
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</tbody>
</table>

Admission Requirements:

To be admitted to the program, candidates must hold at least a four year undergraduate degree or equivalent degree from a college or university of recognized standing and meet the requirements for regular admission to Graduate Studies at CMU. In addition, the candidate must have completed a minimum of 12 semester hours of mathematics and/or statistics courses that include the following: MTH 133 (Calculus II) or the equivalent, one course in linear algebra, and one course in statistics or probability. A grade point average of 3.0 in mathematics and statistics course work is required.

Transfer Credits:

Students may transfer into the degree program up to nine credits of course work from another similar graduate degree program, provided that the student earned a grade of B or better in the course and the course content is equivalent to the course taught in the degree program and approved by the program advisor. The university policy provided by the Office of Research and Graduate Studies supersedes the program policy, if any conflict occurs.

Required Prerequisite Courses (0-6 hours)

- STA 580 - Applied Statistical Methods I 3(3-0)
- STA 584 - Mathematical Statistics I 3(3-0)

Note: Students who have not taken courses similar to STA 580 and/or STA 584 with comparable contents and textbooks are required to take the pre-requisite courses.

Required Courses I (18 hours)

- STA 575 - Statistical Programming for Data Management and Analysis 3(3-0)
- STA 591 - Data Mining Techniques I 3(3-0)
- STA 675 - Advanced Statistical Data Management and Simulation 3(3-0)
- STA 684 - Theory of Statistical Inference 3(3-0)
- STA 686 - Multivariate Analysis 3(3-0)
- STA 695 - Practicum/Internship 3(Spec)

Note: With the approval of the program advisor, students who have taken courses similar to STA 575 and/or STA 591 with comparable contents and textbooks may be allowed to replace the course(s) with elective course(s).

Required Courses II (9 hours)

Select one of the following tracks:

**Track 1: Applied Statistics**

- STA 582 - Experimental Designs 3(3-0)
- STA 590 - Applied Statistical Methods II 3(3-0)
- STA 678 - Categorical Data and Survival Analysis 3(3-0)

**Track 2: Analytics**

- ITC 510 - Software and Data Modeling 3(3-0)
- ITC 686 - Big Data Analytics 3(3-0)
- STA 691 - Advanced Data Mining Techniques 3(3-0)
Electives (3 hours)
Select from the following:

- GEO 501 - Principles and Applications of Geographic Information System 3(2-2)
- MTH 586 - Operations Research I 3(3-0)
- STA 583 - Nonparametric Statistics 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 592 - Six Sigma: Foundations and Techniques for Green Belts 3(3-0)
- STA 595 - Introduction to Bayesian Statistics 3(3-0)
- STA 682 - Linear Models 3(3-0)
- STA 696 - Special Topics in Statistics 1-6(Spec)
- STA 697 - Independent Study 1-9(Spec)

Note 1: Graduate level courses in any discipline different from Mathematics or Statistics with approval of the program advisor may be used as elective courses.

Note 2: Students who are exempted from STA 575 and/or STA 591 under Required Courses I will take a total of 6 or 9 hours under electives.

Total: 30-36 semester hours

Graduate Certificate in Data Mining
This is an interdepartmental graduate certificate. Please check the index for the page number.

Course Descriptions: MTH

- MTH 520 Optimization Theory 3(3-0)
  An introduction to the theory, practical applications and algorithms of non-linear programming. Prerequisites: MTH 233.

- MTH 521 Theory of Numbers 3(3-0)
  Properties of integers, congruences, greatest common divisors and prime factorization, applications of number theory to computer science and/or cryptology. Prerequisite: MTH 332.

- MTH 522 Math of Cryptology 3(3-0)
  The mathematics and algorithms of classical and computer-age cryptography. Substitution, transposition, stream and block ciphers; DES, Rijndael and public key cryptography; cryptanalysis of cipher systems. Prerequisites: CPS 340 or MTH 332.

- MTH 523 Modern Algebra I 3(3-0)
  Groups, rings, integral domains, fields, and fundamental homomorphism theorems. Prerequisite: MTH 332 or graduate status.

- MTH 525 Modern Algebra II 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.

- 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. Sequences, limits, continuity, differentiation, integration, exponential and logarithmic functions, arc length, series. Credits will not count towards M.A. or Ph.D. degree requirements in mathematics. Prerequisites: MTH 233 and MTH 332, or graduate status.

- MTH 533 Advanced Calculus II 3(3-0)
  Continuation of MTH 532. Rigorous development of calculus for functions of several variables. Limits, continuity, differentiation, and integration. Prerequisite: MTH 532.

- MTH 534 Applied Mathematics and Differential Equations 3(3-0)
  Initial-boundary value (linear, nonlinear) problems, orthogonal functions, differential operators, numerical techniques, introduction to partial differential equations, applications to biology, chemistry, engineering, medicine, and physics. Prerequisites: MTH 233, 334.

- MTH 540 Mathematical Theory of Interest 4(4-0)
  Fundamental concepts of mathematical theory of interest and applications in calculating present and accumulated values for various streams of cash flows. Introduction to financial instruments. Prerequisite: MTH 532.

- MTH 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: STA 539; MTH 540.

- MTH 542 Actuarial Mathematics for Life Contingencies II 3(3-0)
  Introduction to multiple state models including multiple life models and multiple decrement models, pension mathematics, interest rate models, and cash flow analysis for insurance products. Prerequisites: MTH 541.

- MTH 543 Introduction to Point-Set Topology 3(3-0)
  Development of elementary point-set topology. Sets, functions, metric spaces, topological spaces, quotient surfaces, compactness, and connectedness. 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 can only be earned in one of the following: MTH 253 or MTH 553 and will not apply toward master's degree in mathematics. Prerequisites: MTH 254 and 351.

- MTH 556 Microcomputers for Elementary Mathematics Teachers 3(3-0)
  Develops the use of microcomputers in elementary education with particular emphasis on mathematical applications. Computer literacy and BASIC programming are included. Open only to those students pursuing a B.S. in Elementary Emphasis. Prerequisites: MTH 107, MTH 251.

- 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 565 Using Graphics Calculators in Mathematics Education 11(1-0)
  Course is designed for secondary mathematics education majors and minors. Emphasis will be on the classroom use of graphics calculators to teach mathematics. Prerequisites: MTH 132; with MTH 223 as a corequisite.

- MTH 566 Microcomputers for Secondary Mathematics Teachers 3(3-0)
  Examines microcomputer use in secondary education with particular emphasis on mathematical applications. Open only to those students pursuing a B.S. in Ed. Secondary Emphasis. Prerequisite: MTH 223.

- MTH 573 History of Mathematics 3(3-0)
  History of arithmetic, algebra, geometry, calculus. Prerequisites: MTH 332 or MTH 334, or graduate status.

- MTH 578 Combinatorics I 3(3-0)
  Introduction to the basic principles of combinatorics and graph theory with applications to problems of nonmathematical origin. Prerequisites: MTH 523.

- MTH 586 Operations Research I 3(3-0)
  Mathematical theory and applications of mathematical programming. Linear programming duality, integer programming, mixed integer programming, and dynamic programming. Prerequisites: MTH 133.

- MTH 587 Operations Research II 3(3-0)
  Continuation of MTH 586. Theory and application of stochastic models in operations research. Inventory models, queuing theory. Markov chains, stochastic programming. Prerequisites: STA 382, MTH 586.

- MTH 591 Seminar in the Solution of Putnam Problems 1-3(Spec)
  Problem-solving techniques demonstrated through solutions of the Putnam Examination problems. Designed particularly for those students interested in participating in the Putnam Examination. Prerequisite: MTH 233; permission of instructor.

- MTH 594 Seminar in Higher Mathematics 3(3-0)
  Class presentation of results of independent study, and final comprehensive written report in an approved subject. Prerequisite: one year of calculus; permission of instructor.

- MTH 595 Special Topics in Mathematics Education 1-6(Spec)
  Subject matter not included in regular mathematics education course. May be taken for credit more than once, total credit not to exceed 6 hours. Specific topics and pre/co-requisites will be announced in Course Search and Registration. May not be counted toward a major or minor in mathematics except for students pursuing a B.S. in Ed. degree. Pre/Co-requisites: See Course Search and Registration.

- 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. Pre/Co-requisite: See Course Search and Registration.

- MTH 597 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.

- MTH 619 Continuing Registration for Final Research Project 11(1-0)
  A non-credit course intended for students who have completed all program requirements but still need to use university resources to complete their degree requirements.

- MTH 623 The Theory of Groups 3(3-0)
  First graduate level course in algebra. Isomorphism theorems for group, Sylow theorems, nilpotent and solvable groups, modules over principal ideal domains/abelian groups. Prerequisites: MTH 523.
### Mathematics

**MTH 625 Theory of Associative Rings** 3-3(0)
- Second graduate level course in algebra. Ring theory, module theory, categories and functors, tensor products. Prerequisites: MTH 623.

**MTH 627 Representation Theory of Lie Algebras** 3-3(0)
- Lie algebras, semisimplicity, representation of Lie algebras, weights and roots, universal enveloping algebras, character and dimension formulas. Prerequisite: MTH 625. Recommended: MTH 527.

**MTH 632 Introduction to Real Analysis and Its Applications** 3-3(0)
- Development of integration theory with introduction to Lebesgue measure and integral on the real line. Elementary theory of normed spaces, bounded linear operators and linear functionals with applications. Prerequisite: MTH 532.

**MTH 633 Real Variables** 3-3(0)

**MTH 634 Fourier Analysis** 3-3(0)

**MTH 636 Introduction to Complex Variables** 3-3(0)
- Conformal mappings, Mobius transformations, harmonic functions, Dirichlet problem, entrie and meromorphic functions, analytic continuation, Reimann surfaces, applications of complex analysis. Prerequisite: MTH 636.

**MTH 638 Theoretical Numerical Analysis** 3-3(0)
- Numerical linear algebra with applications in linear and nonlinear systems. Interpolation and approximation and their applications to numerical differentiation, numerical integration, and differential equations. Prerequisite: MTH 532. Corequisite: MTH 533.

**MTH 641 Topics in Geometry** 3-3(0)
- Advanced topics in geometry, foundations, non-Euclidean geometry. Prerequisite: MTH 341.

**MTH 644 Differential Geometry** 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, manifolds, Riemannian metrics. Prerequisites: MTH 532 or 545.

**MTH 645 Topology** 3-3(0)
- A continuation of MTH 545. Topics include fundamental groups, product spaces, covering spaces, and homology. Prerequisite: MTH 523, MTH 545.

**MTH 651 Basic Ideas and Procedures in Elementary School Arithmetic** 3-3(0)
- Mathematical concepts, fundamental processes, and measurement formulas. Prerequisite: successful completion of the Elementary Teachers Proficiency Tests.

**MTH 652 The Teaching of Measurement** 3-3(0)
- The history, concepts, and learning of measurement systems. The metric system and laboratory activities are emphasized. Prerequisite: teaching experience.

**MTH 656 Teaching & Learning Mathematics with Technology** 3-3(0)
- Use of instructional technology for teaching and learning mathematics and an introduction to related research literature in mathematics and mathematics education. Prerequisite: MTH 566.

**MTH 658 Workshop Teaching Mathematics 1-6(Spec)**
- Preparing materials and investigating methods for teaching mathematics in grades K-12. May be repeated, total credit not to exceed 6 hours. Prerequisite: permission of the instructor.

**MTH 661 The Teaching of Middle School Mathematics** 3-3(0)
- Objectives of mathematics instruction in the middle school. Prerequisite: minor in mathematics or teaching experience in middle or senior high school mathematics.

**MTH 673 History of Advanced Mathematics** 3-3(0)
- History of the development of modern mathematics from 1700 into the 20th century. Prerequisites: MTH 525 and MTH 532.

**MTH 676 Combinatorics II** 3-3(0)
- Finite geometries, combinatorial designs, strongly regular graphs, and error correcting codes. Prerequisite: MTH 576. Corequisite: MTH 525.

**MTH 692 Graduate Seminar in Mathematics Education 1-4(Spec)**
- Seminars focused on current issues in mathematics education. May be taken for credit more than once. Prerequisite: permission of instructor.

**MTH 693 Graduate Seminar in Mathematics**
- One hour seminars in subfields of mathematics and its applications; 3 credits needed before it counts as elective on graduate degrees in mathematics. Prerequisites: Graduate standing in mathematics and permission of instructor.

**MTH 694 Practicum in Mathematics** 3-3(0)
- Taken during last semester in the M.A. program. Introduces concepts of mathematical modeling using deterministic and probabilistic methods. When possible, supervised consulting work in industry. Prerequisites: MTH 623 and permission of instructor.

**MTH 695 Special Topics in Mathematics Education** 1-6(Spec)
- Consideration of 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 696 Special Topics in Mathematics** 1-6(Spec)
- Consideration of subject matter not included in regular courses. May be taken for credit more than once; total credit not to exceed six hours. Pre/Co-requisites: See Course Search and Registration.

**MTH 697 Independent Study** 1-9(Spec)
- Open to graduate students in mathematics. May be taken for credit more than once; total credit not to exceed 9 hours. Prerequisite: permission of the instructor.

**MTH 698 Plan B Project 1-2(Spec)**
- Plan B paper is normally an expository paper or research project on an area or problem related to but in addition to material covered in a course, written under the direction of graduate faculty. Each Plan B project is 1 credit hour. May be taken for credit more than once. Total credit not to exceed 2 hours. CR/NC only. Prerequisites: permission of advisor.

**MTH 725 Topics in Algebra** 3-3(0)
- Advanced topics in abstract algebra. Designed to add breadth to the student's abstract algebra background and to open possible research areas. Prerequisites: MTH 625.

**MTH 732 Functional Analysis** 3-3(0)

**MTH 734 Partial Differential Equations and Applications** 3-3(0)
- Solutions of partial differential equations by analytic and numerical techniques using standard methods, including Fourier series and Laplace transforms, perturbation, finite elements and finite differences. Prerequisites: MTH 334 and MTH 636.

**MTH 761 Methods for Teaching College Mathematics** 3-3(0)
- Methods in teaching undergraduate mathematics including technology use, cooperative learning, inquiry, and guided discovery. Students will create activities and discuss issues surrounding undergraduate instruction. Prerequisite: completion of 12 hours of graduate mathematics at CMU and admission to one of the graduate programs in the Department of Mathematics.

**MTH 762 A Survey of Research in Collegiate Mathematics Education** 3-3(0)
- Introduction to understanding and interpreting mathematics education research, trends, and evaluation at the undergraduate level. Prerequisites: MTH 761.

**MTH 763 Advanced Perspectives in Collegiate Mathematics Education** 3-3(0)
- Advanced perspectives in collegiate mathematics education as it relates to the areas of teaching, learning, and curriculum. Prerequisites: MTH 762 and EDU 614.

**MTH 764 Qualitative Research Methods in Mathematics Education** 3-3(0)
- Introduction to the qualitative research in mathematics education including research design, development of protocols, fieldwork, collecting and analyzing data and techniques for interviewing. Prerequisite: MTH 763.

**MTH 766 Internship: College Teaching 3-6(Spec)**
- Teaching of approved undergraduate mathematics or statistics courses. Students will conduct their teaching internship under the supervision of a graduate faculty member. CR/NC only. Prerequisites: MTH 761; successful completion of all qualifying examinations.

**MTH 767 Seminar I in Collegiate Mathematics Education 3-3(0)**
- Use of a review of literature to focus research questions and to develop a research proposal. Each student develops a proposal for his/her dissertation research. Prerequisites: MTH 764.

**MTH 768 Seminar in Collegiate Mathematics Education II 3-3(0)**
- Conduct a pilot study to collect and analyze data. The students will then develop conclusions and implications of the study. Prerequisites: MTH 767. Pre/Co-requisite: PSY 611.

**MTH 778 Topics in Combinatorics** 3-3(0)
- Advanced topics in combinatorics. Designed to add breadth to the student's combinatorial background and to open possible research areas. Prerequisite: MTH 678.

**MTH 796 Special Topics in Mathematics** 1-6(Spec)
- Consideration of subject matter not included in regular courses. May be taken for credit more than once; total credit not to exceed 6 hours. Prerequisite: completion of 30 hours of coursework required for the Doctoral program.

**MTH 797 Independent Study 1-9(Spec)**
- Open to doctoral students in mathematics. May be taken for credit more than once; total credit not to exceed 9 hours. Prerequisites: 30 hours of coursework toward the doctoral program; permission of the instructor.

**MTH 798 Thesis 1-6(Spec)**
- Master's thesis research. CR/NC only. Prerequisites: Graduate status and permission of thesis advisor.
MTH 898 Dissertation 1-30(Spec)
Doctoral dissertation research. CR/NC only. Prerequisites: Doctoral status and permission of dissertation advisor.

Course Descriptions: STA

STA 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. Prerequisites: FIN 317; STA 584.

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. This course may be offered in an online or hybrid format. Prerequisites: STA 282 or 382; 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. This course may be offered in an online or hybrid format. Prerequisites: STA 282 or 382; 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 samples 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, Box-Jenkins models, time series regression, and transfer function models. Prerequisite: STA 580.

STA 590 Applied Statistical Methods II 3(3-0)
Multivariate ANOVA, multiple comparison procedures, analysis of covariance, repeated measures analysis, unbalanced data and missing data analysis. Prerequisites: STA 580 and MTH 223.

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. This course may be offered in an online or hybrid format. Prerequisites: 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, 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.

STA 675 Advanced Statistical Data Management and Simulation 3(3-0)
Advanced computational techniques for data management, statistical computing and simulation, including SAS Macro programming language, R, and SAS SQL. Prerequisite: STA 575, 584.

STA 678 Categorical Data and Survival Analysis 3(3-0)
Contingency tables, logistic regression models, log-linear models, nonparametric methods of survival analysis, Cox proportional hazard models and accelerated failure time models. Prerequisites: STA 580, 584.

STA 682 Linear Models 3(3-0)
Theory and application of least squares method and hypothesis testing for the linear regression models. Prerequisites: MTH 525; STA 584.

STA 684 Theory of Statistical Inference 3(3-0)
Stochastic convergence and limiting theorems, sampling distributions, theory of point estimation and hypothesis testing, general linear hypotheses, sequential probability ratio test. Prerequisites: MTH 532 and STA 584.

STA 686 Multivariate Analysis 3(3-0)
Multivariate normal distributions, multivariate methods including multivariate analysis of variance, multivariate regression, principal component analysis, factor analysis, canonical correlation, discriminant analysis and cluster analysis. Prerequisites: STA 580, STA 584.

STA 691 Advanced Data Mining Techniques 3(3-0)
Data mining techniques for analyzing high dimensional data: include cluster and sequence analysis, self organizing maps, support vector machine, path mining, and Bayesian network. Recommended: STA 580 or equivalent.

STA 695 Practicum/Internship 3(Spec)
In-depth capstone practicum project supervised by a faculty member or advanced internship experience in external agency supervised by a faculty member and a professional supervisor. Prerequisite: Permission of the program advisor.

STA 696 Special Topics in Statistics 1-6(Spec)
Subject matter not included in regular courses. Course may be taken for credit more than once, total credit not to exceed six hours. Prerequisites: Graduate student status and permission of instructor.

STA 697 Independent Study 1-9(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 nine hours. Prerequisites: Permission of instructor.

STA 782 Generalized Linear Models 3(3-0)
Theory and applications of generalized linear models, models for continuous data, models for binary and polytomous data, log-linear models, quasi-likelihood functions and model checking. Prerequisite: STA 682.

STA 784 Theory of Estimation 3(3-0)
Theory of point estimation in Euclidean sample spaces. Topics include unbiasedness, equivariance, global properties, large-sample theory, and asymptotic optimality. Prerequisites: STA 684; MTH 632.

STA 797 Independent Study 1-9(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 nine hours. Prerequisites: Permission of instructor.
College of Medicine
(MED)

George Kikano, M.D., Dean
CMED South; (989) 774-7547; www.cmich.edu/med
Sandra Andre, Assistant Dean/Faculty and Staff Affairs, M.S., Michigan State University
Deborah Biggs, Associate Dean/Administration & Finance; J. D., Thomas M. Cooley Law School
Kevin Karbowski, Assistant Dean/Faculty Group Practice, M.H.S., University of Michigan
Joel H. Lanphear, Senior Associate Dean/Educational Programs and Interim Associate Dean/Student Affairs, Ph.D., Michigan State University
Linda Perkowski, Senior Associate Dean/Academic Affairs, Ph.D., University of Texas Medical Branch in Galveston Texas
Robert Satonik, Assistant Dean/Graduate Medical Education, M.D., Northeastern Ohio Universities College of Medicine
Steven Vance, Associate Dean/Academic and Clinical Technology: M.D., Michigan State University
Stephanie Wragg, Associate Dean/Curriculum and Evaluation, Ph.D., University of Rochester
Ernest L. Yoder, Founding Dean; M.D., Ph.D., Wayne State University; MACP
Sarah Yonder, Assistant Dean/Student Affairs, M.D., Saint George's University School of Medicine

Faculty

Faculty from the three disciplines (Foundational Sciences, Medical Disciplines and Surgical Disciplines) will be participating in instruction. Please see the CMED website at www.cmich.edu/colleges/cmed for a complete listing of faculty and additional information.

Scholarships

Rollin M. Gerstacker Endowed Medical Scholarship
Established in 2012 by the Rollin M. Gerstacker Foundation. Income from the endowment will support a renewable award for a full-time third or fourth year student enrolled in the CMU College of Medicine who is assigned or has completed a community clerkship at a Mid-Michigan Health facility and has a minimum GPA of 3.5. Applicant should have a stated purpose, explained in a required essay, in pursuing a primary care role. Applicant should also have a stated interest in considering a MidMichigan Health residency and/or returning to practice in the MidMichigan Health services area as defined by the following counties: Midland, Isabella, Mecosta, Montcalm, Ogemaw.

MidMichigan Health Endowed Scholarship
Established in 2012 by MidMichigan Health, its employees and friends. Income from the endowment will support a renewable award for a full-time third or fourth year student enrolled in the CMU College of Medicine who is assigned or has completed a community clerkship at a MidMichigan Health facility and has a minimum GPA of 3.5. Applicant should have a stated purpose, explained in a required essay, in pursuing a primary care role. Applicant should also have a stated interest in considering a MidMichigan Health residency and/or returning to practice in the MidMichigan Health services area as defined by the following counties: Midland, Isabella, Mecosta, Montcalm, Ogemaw.

Morey Medical Scholarship
Established in 2013 by The Morey Foundation for support of a renewable award for a full-time student enrolled in the College of Medicine who is a Michigan resident, has shown community service and has a minimum GPA of 3.4. Applicant should have a stated purpose, explained in a required essay, in pursuing a primary care role. Applicant should have a stated purpose, explained in a required essay, in pursuing a primary care role. Applicant should also have a stated interest in considering a MidMichigan Health residency and/or returning to practice in the MidMichigan Health services area as defined by the following counties: Midland, Isabella, Mecosta, Montcalm, Ogemaw.

Myler Family Scholarship
Established in 2013 by the Myler Family and Muskegon Development Company for support of a renewable award for a full-time first year student enrolled in the College of Medicine who has a minimum GPA of 3.4. Preference will be given to a student that is a resident of mid- or northern Michigan, especially the Flint and Saginaw areas. Applicant should submit a short essay correlating how his or her personality and skills are a good match for a rural healthcare environment. Financial need not a requirement, but may be considered if recipient selection is competitive.

Dr. George E. & Elizabeth G. Ross Future Physician Award
Established in 2014 by CMU's fourteenth President and his spouse, Dr. George and Elizabeth Ross. The endowment will support a renewable award for a full-time first year student enrolled in the College of Medicine who has a minimum GPA of 3.5. Preference will be given to a student that is a resident of MidMichigan Health services area as defined by the following counties: Midland, Isabella, Mecosta, Montcalm, Ogemaw.

Dr. George E. & Elizabeth G. Ross Future Physician Award
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Myler Family Scholarship
Established in 2013 by the Myler Family and Muskegon Development Company for support of a renewable award for a full-time first year student enrolled in the College of Medicine who has a minimum GPA of 3.4. Preference will be given to a student that is a resident of mid- or northern Michigan, especially the Flint and Saginaw areas. Applicant should submit a short essay correlating how his or her personality and skills are a good match for a rural healthcare environment. Financial need not a requirement, but may be considered if recipient selection is competitive.

Isabella Bank Endowed Medical Scholarship
Established in 2013 by Isabella Bank to support of a renewable award for a full-time first year student enrolled in the College of Medicine who has a minimum GPA of 3.0. Recipient should have a stated interest in considering a residency in the central region of Michigan and/or returning to practice in the central region of Michigan as defined by the following counties: Clare, Gratiot, Isabella, Mecosta, Midland, Montcalm or Saginaw.

MidMichigan Health Endowed Scholarship
Established in 2012 by MidMichigan Health, its employees and friends. Income from the endowment will support a renewable award for a full-time third or fourth year student enrolled in the CMU College of Medicine who is assigned or has completed a community clerkship at a MidMichigan Health facility and has a minimum GPA of 3.5. Applicant should have a stated purpose, explained in a required essay, in pursuing a primary care role. Applicant should also have a stated interest in considering a MidMichigan Health residency and/or returning to practice in the MidMichigan Health services area as defined by the following counties: Midland, Isabella, Gratiot, Clare, Gladwin, Montcalm, Roscommon or Ogemaw.

Morey Medical Scholarship
Established in 2013 by The Morey Foundation for support of a renewable award for a full-time student enrolled in the College of Medicine who has a minimum GPA of 3.4. Applicant should have a stated purpose, explained in a required essay, in pursuing a primary care role. Applicant should also have a stated interest in considering a MidMichigan Health residency and/or returning to practice in the MidMichigan Health services area as defined by the following counties: Midland, Isabella, Mecosta, Montcalm, Ogemaw.

Myler Family Scholarship
Established in 2013 by the Myler Family and Muskegon Development Company for support of a renewable award for a full-time first year student enrolled in the College of Medicine who has a minimum GPA of 3.4. Preference will be given to a student that is a resident of Lower Michigan who was born and raised in a community located between M-46 and the Mackinaw Bridge. Financial need not a requirement, but may be taken into consideration if the recipient selection is competitive.

Dr. George E. & Elizabeth G. Ross Future Physician Award
Established in 2014 by CMU’s fourteenth President and his spouse, Dr. George and Elizabeth Ross. The endowment will support a renewable award for a full-time first year student enrolled in the College of Medicine who has a minimum GPA of 3.5. Preference will be given to a student that is a resident of MidMichigan Health services area as defined by the following counties: Midland, Isabella, Mecosta, Montcalm, Ogemaw.

Charles J. Strosacker Endowed Medical Scholarship
Established in 2013 by the Charles J. Strosacker Foundation for support of a renewable award for a full-time first year student enrolled in the College of Medicine who has a minimum GPA of 3.4. Applicant should have a stated purpose, explained in a required essay, in pursuing a primary care role. Applicant should also have a stated interest in considering a MidMichigan Health residency and/or returning to practice in the MidMichigan Health services area as defined by the following counties: Midland, Isabella, Gratiot, Clare, Gladwin, Montcalm, Roscommon or Ogemaw.

Summit Petroleum Corporation Medical Scholarship
Established in 2012 by Summit Petroleum Corporation and Robert and Jeanne Long. Income from the endowment will support a renewable award for a full-time student enrolled in the College of Medicine who has a minimum GPA of 3.2 and is a Michigan resident. Recipient must have expressed financial need which is evident through required essay.
### Doctor of Medicine (M.D.)

**Minimum Totals for Graduation: 243 hours**

The Central Michigan University College of Medicine (CMED) curriculum is an innovative, inquiry-based educational program which is integrated, individualized, sustains life-long engagement and embodies the values of the profession. This competency-based curriculum balances formal instruction with clinical training across the continuum of the fully integrated curriculum. Upon successful completion of the four-year professional program, the student will receive the Doctor of Medicine degree (MD). CMED will take a holistic approach to admissions. We seek to admit students who have personal characteristics and interests that align with CMED’s mission to prepare physicians focused on improving access to high quality health care in rural and medically underserved areas in Michigan. The holistic process includes measuring a student’s cognitive capabilities, past experiences and personal attributes.

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### Admission Requirements, Retention & Termination Standards

Students should access the most current information directly from the CMU College of Medicine website [www.cmich.edu/med](http://www.cmich.edu/med).

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#### Required Courses - Year I (81 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Spec</th>
</tr>
</thead>
<tbody>
<tr>
<td>MED 600</td>
<td>Society &amp; Community Medicine</td>
<td>9(Spec)</td>
</tr>
<tr>
<td>MED 610</td>
<td>Essentials of Clinical Skills</td>
<td>17(Spec)</td>
</tr>
<tr>
<td>MED 620</td>
<td>The Art of Medicine</td>
<td>9(Spec)</td>
</tr>
<tr>
<td>MED 630</td>
<td>Foundational Sciences of Medicine: Wellness and Disease</td>
<td>18(Spec)</td>
</tr>
<tr>
<td>MED 640</td>
<td>Reproductive/Human Development: Wellness and Disease</td>
<td>8(Spec)</td>
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<tr>
<td>MED 650</td>
<td>Cardiopulmonary: Wellness and Disease</td>
<td>10(Spec)</td>
</tr>
<tr>
<td>MED 660</td>
<td>Renal/Endocrine: Wellness and Disease</td>
<td>10(Spec)</td>
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#### Required Courses - Year II (38 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MED 740</td>
<td>Neurosciences and Behavior: Wellness and Disease</td>
<td>10(Spec)</td>
</tr>
<tr>
<td>MED 750</td>
<td>Musculoskeletal/Dermal: Wellness and Disease</td>
<td>8(Spec)</td>
</tr>
<tr>
<td>MED 760</td>
<td>Gastrointestinal: Wellness and Disease</td>
<td>8(Spec)</td>
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<tr>
<td>MED 770</td>
<td>Hematology/Oncology: Wellness and Disease</td>
<td>8(Spec)</td>
</tr>
<tr>
<td>MED 780</td>
<td>SYNAPSE 4(Spec)</td>
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#### Required Courses - Years III and IV (124 hours)

To be taken in Year III only:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Spec</th>
</tr>
</thead>
<tbody>
<tr>
<td>MED 797</td>
<td>Special Topics: Medical Clerkship Elective</td>
<td>1-30(Spec)</td>
</tr>
<tr>
<td>MED 800</td>
<td>Comprehensive Community Clerkship</td>
<td>36(Spec)</td>
</tr>
</tbody>
</table>

May be taken in either Year III or IV:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Spec</th>
</tr>
</thead>
<tbody>
<tr>
<td>MED 810</td>
<td>Clerkship: Surgery</td>
<td>6(Spec)</td>
</tr>
<tr>
<td>MED 820</td>
<td>Clerkship: Hospitalist - Internal Medicine</td>
<td>6(Spec)</td>
</tr>
<tr>
<td>MED 830</td>
<td>Clerkship: Psychiatry</td>
<td>6(Spec)</td>
</tr>
<tr>
<td>MED 840</td>
<td>Clerkship: Obstetrics and Gynecology</td>
<td>6(Spec)</td>
</tr>
</tbody>
</table>

To be taken in Year IV only:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Spec</th>
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<tbody>
<tr>
<td>MED 910</td>
<td>Surgery Sub-Internship</td>
<td>8(Spec)</td>
</tr>
<tr>
<td>MED 920</td>
<td>Internal Medicine Sub-Internship</td>
<td>8(Spec)</td>
</tr>
<tr>
<td>MED 930</td>
<td>Clerkship: Emergency Medicine</td>
<td>6(Spec)</td>
</tr>
<tr>
<td>MED 997</td>
<td>Special Topics: Medical Clerkship Elective</td>
<td>1-42(Spec)</td>
</tr>
<tr>
<td>MED 999</td>
<td>Capstone 6(Spec)</td>
<td></td>
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</tbody>
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**Total: 243 semester hours**

**Note:** MED 600, 610, and 620 are to be delivered longitudinally across the first two years of the CMED curriculum. Total credit hours per year reflect half of the total of each of these courses. Example: MED 600 (9 hours) - 4.5 included in Year I total of 63 and 4.5 included in Year II total of 56.

CMED students are required to take a minimum of 24 weeks of electives. These courses will be taken as MED 797 or MED 997 Special Topics courses and must be approved by the CMED Office of Curriculum.

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### Course Descriptions: MED

**MED 600 Society & Community Medicine 9(Spec)**

Integrates population and public health concepts with individual and community needs, health, and healthcare access, providing essential context for ethical, cultural, legal, and organizational concepts. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 610 Essentials of Clinical Skills 17(Spec)**

An integrated clinical, diagnostic, and therapeutic skill development course. Emphasis is placed on history-taking, physical examination, and diagnostic skills presented by body system. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 620 The Art of Medicine 9(Spec)**

Explores foundational elements of professionalism, ethics, humanities, and self-care in the medical profession. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 630 Foundational Sciences of Medicine: Wellness and Disease 18(Spec)**

Builds a knowledge base of the basic science mechanisms underlying wellness and disease that are presented in subsequent courses. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 640 Reproductive/Human Development: Wellness and Disease 8(Spec)**

Provides the basic and clinical sciences knowledge and learning experiences required to understand wellness and disease mechanisms for the human development and reproductive system. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 650 Cardiopulmonary: Wellness and Disease 10(Spec)**

Develops the basic and clinical sciences knowledge base required for understanding mechanisms underlying wellness and diseases of the cardiopulmonary system. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 660 Renal/Endocrine: Wellness and Disease 10(Spec)**

Develops the basic and clinical sciences knowledge base required for understanding mechanisms underlying wellness and diseases of renal and endocrine systems. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 740 Neurosciences and Behavior: Wellness and Disease 10(Spec)**

Provides instruction on the basic structure and function of the nervous system and a clinical foundation required for examination and treatment of its disorders. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 750 Musculoskeletal/Dermal: Wellness and Disease 8(Spec)**

Develops the basic and clinical sciences knowledge base required for understanding mechanisms underlying wellness and diseases of the musculoskeletal and dermal systems. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 760 Gastrointestinal: Wellness and Disease 10(Spec)**

Provides the basic and clinical sciences knowledge and learning experiences required to understand wellness and disease mechanisms for the gastrointestinal system. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 770 Hematology/Oncology: Wellness and Disease 8(Spec)**

Develops the basic and clinical sciences knowledge base required for understanding mechanisms underlying wellness and diseases of the hematologic system. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 780 SYNAPSE 4(Spec)**

A course providing a review of curriculum to date and a transition to the clinical experiences in the third and fourth years. CR/NC only. Prerequisite: Admission to the College of Medicine.

**MED 797 Special Topics: Medical Clerkship Elective 1-30(Spec)**

Topics of special interest to second-year medical students, in good standing, that extends their knowledge and their skills in patient care or research. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum.

**MED 800 Comprehensive Community Clerkship 36(Spec)**

Based in primary care practices in central and northern Michigan. Teaches basic competencies of family medicine, pediatrics, internal medicine, psychiatry, obstetrics/gynecology, and surgery. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum.

**MED 810 Clerkship: Surgery 6(Spec)**

Teaches basic competencies of Surgery pertinent to the care of patients, in a clinical setting. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum. Recommended: MED 800.

**MED 820 Clerkship: Hospitalist - Internal Medicine 6(Spec)**

Teaches basic competencies of hospitalist medicine pertinent to hospital care of patients. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum. Recommended: MED 800.

**MED 830 Clerkship: Psychiatry 6(Spec)**

Teaches basic competencies of Psychiatry pertinent to the care of patients, in a clinical setting. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum. Recommended: MED 800.
The School of Music is accredited by the National Association of Schools of Music. Thirty-six full-time and nine part-time faculty teach all specializations in the field of music. The faculty’s reputation as outstanding performers, conductors, composers, and—most importantly—educators, is known throughout the nation. Students in the school immediately sense an unyielding commitment on the part of each faculty member to outstanding musical education.

MASTER OF MUSIC (M.M.)
Minimum Totals for Graduation: 30 hours

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

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<tr>
<th>REQUIREMENT</th>
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</thead>
<tbody>
<tr>
<td>GPA</td>
<td>3.0</td>
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<tr>
<td>Entrance Exam</td>
<td>N/A</td>
</tr>
<tr>
<td>Internat’l Application Deadline</td>
<td>July 1 (Fall), Oct. 1 (Spring)</td>
</tr>
</tbody>
</table>

Admission
In addition to university requirements for graduate admission, applicants for the Master of Music degree must meet the following requirements in the School of Music:

1. Possess a completed undergraduate music degree or other degree with at least 40 semester hours with a grade point average of 3.0 or better in music studies.
2. Submit three letters of recommendation and a writing example (e.g., term paper from undergraduate studies) to the School of Music.
3. Complete audition requirements according to degree concentration, as follows, arranged through the School of Music:

MED 840 Clerkship: Obstetrics and Gynecology 6(Spec)
An introductory experience in the provision of comprehensive medical care and counseling services of female patients, focusing on commonly encountered obstetrical conditions and gynecological problems. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum. Recommended: MED 800.

MED 910 Surgery Sub-Internship 8(Spec)
Surgical immersion experience with adult or pediatric patients, designed to prepare the student for the responsibilities of an internship. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum. Recommended: MED 800, 810.

MED 920 Internal Medicine Sub-Internship 8(Spec)
Internal medicine immersion experience with adult or pediatric patients, designed to prepare the student for the responsibilities of an internship. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum. Recommended: MED 800, 820.

MED 930 Clerkship: Emergency Medicine 6(Spec)
Teaches basic competencies of Emergency Medicine pertinent to the care of patients in emergency department/urgent care clinical setting. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum. Recommended: MED 800, 810, 820.

MED 997 Special Topics: Medical Clerkship Elective 1—42(Spec)
Topics of special interest to third/fourth-year students that extend their knowledge of a specialty area, develop skills in patient care/research, or prepare them for residency. CR/NC only. Prerequisites: Permission from CMED Office of Curriculum.

MED 999 Capstone 6(Spec)
Reviews, reinforces, and expands knowledge and skills necessary to begin the first year of residency training. CR/NC only. Prerequisites: Completion of all required CMED courses and clerkships as well as 24 weeks of electives.
Concentrations
• Composition applicants must submit a portfolio of their compositions accompanied by a CD or online recording of submitted compositions.
• Conducting applicants must submit a DVD or online recording of their conducting.
• Music Education applicants must complete an interview with the School of Music Graduate Coordinator.
• Performance applicants must audition with the appropriate faculty member or performance area.

4. Any exceptions to the above requirements must be approved by the School of Music Graduate Committee.

Program Requirements
1. Each candidate will develop a program of studies in consultation with the School of Music Graduate Coordinator.
2. Candidates for the Master of Music degree must pass entry competency tests and an end-of-program comprehensive examination. Competency tests may be taken the day of the audition to the program or must be taken by the end of the first week of classes of the first semester of graduate course work, as scheduled by the School of Music Graduate Coordinator. When supplementary work is indicated by competency test results, students will be advised into appropriate preparatory courses.
3. Credit earned in courses taken to remove deficiencies will not apply toward the graduate degree.
4. Candidates for the Master of Music degree must complete the Music Core and the requirements of one of the concentrations.
5. Candidates for the Master of Music: Music Education concentration must have completed teaching certification requirements before graduation; international students returning to their country of origin are omitted from this requirement.

Degree Requirements
Core Courses (12 hours)
MUS 791 - Introduction to Music Research 3(3-0)
Plus:
• 3-6 hours in Music Theory
• 3-6 hours in Music History/Literature
These courses selected in consultation with an advisor.

Concentrations
Select one of the following options:

Music: Composition
Required Courses (12 hours)
MUS 701 - Advanced Composition 2-6(Spec)
MUS 798 - Thesis 1-6(Spec)
Note: 8 hours of MUS 701; 4 hours of MUS 798.
Electives (6 hours)
Participation in conducted or coached ensembles is recommended (6 hours)
Total: 30 semester hours

Music: Conducting
Required Courses I (6 hours)
Select one of the following:
MUS 781 - Advanced Choral Conducting 3-6(Spec)
MUS 782 - Advanced Instrumental Conducting 3-6(Spec)
Required Courses II (2-3 hours)
Select one of the following:
MUS 512 - Choral Literature II (Since 1750) 2(2-0)
MUS 784 - Instrumental Rehearsal Techniques 3(3-0)
Required Course III (4 hours)
MUS 799 - Recital 4(Spec)
Electives (5-6 hours)
Participation in conducted or coached ensembles is recommended.
Total: 30 semester hours

Course Descriptions: MUS
MUS 503  Advanced Counterpoint 2(2-0)
Advanced countrapuntal techniques and writing assignments in 18th century style. Prerequisites: MUS 302; Music candidacy; or admission to the graduate music program.
MUS 504  Modern Compositional Styles/Techniques 2(2-0)
The exploration and application of significant trends in compositional techniques from 1900 to the present. Prerequisites: MUS 202 and Music candidacy; or admission to the graduate music program.
MUS 505  Seminar in Contemporary Music Analysis 2(2-0)
Analysis of selected contemporary compositions. Prerequisites: Music Candidacy, MUS 202; or admission to the graduate music program.
MUS 506  Advanced Scoring 2(2-0)
Scoring for large ensembles. Prerequisite: MUS 304 and admission to Music Candidacy; or graduate standing in 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 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-Schoenberg approach to music education. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.
MUS 532  Dalcroze Eurythmics 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.

MUS 607 Music Technology Seminar 3(3-0)
Practical application of music-related technology equipment and software as they relate to the needs of music educators and professional musicians. Prerequisite: Admission to the graduate music program.

MUS 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements. Prerequisite: Admission to the graduate music program.

MUS 620 Jazz Harmony and Analysis 3(3-0)
Advanced study of jazz harmony focusing on tonal and modal music. Prerequisite: Admission to the graduate music program.

MUS 621 Jazz Improvisation Pedagogy and Practicum 2(1-2)
Develop the skills, methods, and materials necessary to teach jazz improvisation through observation, research and teaching. Prerequisite: Admission to the graduate music program; MUS 620.

MUS 622 Modern Jazz History 3(3-0)
A course in modern jazz history designed for graduate music students that covers important styles and figures in the jazz genre since 1940. Prerequisite: Admission to the graduate music program.

MUS 624 Jazz Pedagogy 3(2-2)
A course designed to enhance skills in the teaching of jazz as a performing art and as a historically significant cultural event. Prerequisite: admission to the graduate music program.

MUS 631 Advanced Piano Pedagogy I 3(3-0)
Elementary through early intermediate teaching materials, methods, and technology for the independent teacher. Prerequisite: Admission to the graduate music program.

MUS 632 Advanced Piano Pedagogy II 3(3-0)
Intermediate to advanced piano teaching methods and materials. Prerequisite: Admission to the graduate music program, MUS 631.

MUS 633 Class Piano Pedagogy 3(3-0)
Materials and teaching techniques for group piano teaching at the pre-college and college levels. Prerequisite: Admission to the graduate music program.

MUS 634 Piano Pedagogy Practicum 3(2-2)
Supervised experience in teaching piano at the pre-college and college levels. Prerequisites: Admission to the graduate music program; MUS 631 or 632 or 633.

MUS 701 Composition 2-8(Spec)
Graduate applied study of music composition. Prerequisite: Admission to the graduate music program.

MUS 707 Analytical Styles I: Medieval-Classical 3(3-0)
Detailed analysis of selected representative works from the Medieval era through the Classical period. Prerequisite: admission to the graduate music program.

MUS 708 Analytical Styles II: 19-21st Century 3(3-0)
Detailed analysis of selected representative works from the 19th century through the modern day. Prerequisites: admission to the graduate music program.

MUS 711 Choral Masterworks 3(3-0)
A survey of masterworks of the choral/orchestral repertoire. In-depth examination of major works and exploration of minor choral works written by the masters. Prerequisites: Admission to the graduate music program.

MUS 713 Early Jazz and American Culture through 1945 3(3-0)
A jazz course taught with emphasis on early jazz chronology as it relates to American culture. Prerequisite: admission to graduate program.

MUS 714 Wind Band Literature 3(3-0)
A survey of wind band literature and its evolution from 1500 to present. Prerequisite: admission to the graduate music program.

MUS 715 Rock ‘n’ Roll Seminar 3(3-0)
Traces the roots of rock, surveys the various types of rock, and provides in-depth analysis of the music. This course may be offered in an online or hybrid format. Prerequisite: admission to graduate music program (music major status not required).

MUS 717 Historical Topics I: Medieval - Classical 3(3-0)
Examination of selected topics in the history of music from the Medieval era through the Classical period. Prerequisite: admission to the graduate music program.

MUS 718 Historical Topics II: 19-20th Century 3(3-0)
Examination of selected topics in the history of music from the Romantic period through the twentieth century. Prerequisite: admission to the graduate music program.

MUS 719 Seminar in World Music 3(3-0)
A survey of selected musical cultures from around the world, with an emphasis on the study of music in its broader cultural context. Music major status not required.

MUS 720 Seminar in the Music of a Selected Composer 3-9(Spec)
Critical examination of the 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. Prerequisite: MUS 717 or 718.

MUS 731 Curriculum Design in Music Education 3(3-0)
Examination of contemporary practices, methods, and resources for developing standards-based curricula for K-12 music programs. Prerequisite: admission to the graduate music program.

MUS 732 History and Philosophy of Music Education 3(3-0)
Examines the history of music education in the United States and philosophical bases for teaching music. Provides a rationale for a comprehensive music education program. Prerequisite: admission to the graduate music program.

MUS 733 Woodwind Pedagogy 3(3-0)
Advanced study of pedagogical methodologies and materials for woodwind instruments. Prerequisite: Admission to the graduate music program.

MUS 734 Brass Pedagogy 3(3-0)
Advanced study of pedagogical methodologies and materials for brass instruments. Prerequisite: admission to the graduate music program.

MUS 735 Percussion Pedagogy 3(3-0)
Advanced study of pedagogical methodologies and materials for percussion instruments. Prerequisite: admission to the graduate music program.

MUS 736 String Pedagogy 3(3-0)
Advanced study of pedagogical methodologies and materials for string instruments. Prerequisite: admission to the graduate music program.

MUS 750 Voice 1-8(Spec)
Individualized program of applied studio instruction in voice performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. This course is repeatable. Prerequisites: Admission to the Graduate Music Program; Successful completion of a music audition.

MUS 751 Organ 1-8(Spec)
Individualized program of applied studio instruction in organ performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; Successful completion of music audition.

MUS 752 Piano 1-8(Spec)
Individualized program of applied studio instruction in piano performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. This course is repeatable. Prerequisites: Admission to the graduate music program; Successful completion of music audition.

MUS 753 Violin and Viola 1-8(Spec)
Individualized program of applied studio instruction in violin performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. This course is repeatable. Prerequisites: Admission to the graduate music program; Successful completion of music audition.

MUS 754 Viola 1-8(Spec)
Individualized program of applied studio instruction in viola performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. This course is repeatable. Prerequisites: Admission to the Graduate Music Program; Successful completion of music audition.

MUS 755 Violoncello 1-8(Spec)
Individualized program of applied studio instruction in violoncello performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisite: Admission to the Graduate Music Program; Successful completion of music audition.
MUS 757 String Bass 1-8(Spec)
Individualized program of applied studio instruction in string bass performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. This course is repeatable. Prerequisites: Admission to the Graduate music program; successful completion of music audition.

MUS 760 Harpsichord 1-8(Spec)
Individualized program of applied studio instruction in harpsichord performance focusing on advanced technique, musicianship, literature, and performance practice. This course is repeatable. Prerequisite: Admission to the graduate music program.

MUS 761 Flute 1-8(Spec)
Individualized program of applied studio instruction in flute performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 763 Oboe 1-8(Spec)
Individualized program of applied studio instruction in oboe performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. This course is repeatable. Prerequisite: Admission to the graduate music program; successful completion of music audition.

MUS 765 Clarinet 1-8(Spec)
Individualized program of applied studio instruction in clarinet performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 767 Bassoon 1-8(Spec)
Individualized program of applied studio instruction in bassoon performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 769 Saxophone 1-8(Spec)
Individualized program of applied studio instruction in saxophone performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 771 Trumpet 1-8(Spec)
Individualized program of applied studio instruction in trumpet performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 773 Horn 1-8(Spec)
Individualized program of applied studio instruction in horn performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. This course is repeatable. Prerequisites: Admission to the graduate music program; successful completion of music audition.

MUS 775 Trombone 1-8(Spec)
Individualized program of applied studio instruction in trombone performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 777 Euphonium 1-8(Spec)
Individualized program of applied studio instruction in euphonium performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 778 Tuba 1-8(Spec)
Individualized program of applied studio instruction in tuba performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 779 Percussion 1-8(Spec)
Individualized program of applied studio instruction in percussion performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 780 Performance Ensembles 1-8(Spec)
Preparation and performance of music repertoire in an ensemble setting. Open by audition to any graduate student in the university. CR/NC only.

MUS 781 Advanced Choral Conducting 3-6(Spec)
Advanced score preparation, rehearsal and conducting techniques for the choral music educator/conductor. Prerequisite: Admission to the graduate music program.

MUS 782 Advanced Instrumental Conducting 3-6(Spec)
Advanced score preparation and conducting techniques for instrumental music educators and conductors. Prerequisites: Admission to the Graduate Music Program; Successful completion of music audition.

MUS 784 Instrumental Rehearsal Techniques 3-6(Spec)
Pedagogical techniques for the musical preparation of instrumental ensembles. Prerequisite: admission to the graduate music program.

MUS 785 Psychology of Music Teaching and Learning 3(3-0)
Psychological foundations of music instruction, perception, response, and learning. Prerequisite: admission to the graduate music program.

MUS 787 Research Project in Music Education 2(Spec)
Qualitative, quantitative, or action research coordinated with a music education faculty member. Prerequisites: Admission to the graduate music program.

MUS 790 Independent Study 1-9(Spec)
Student-initiated study guided by faculty member or faculty committee. Repeatable up to nine hours when content does not duplicate previous independent studies. Prerequisite: Admission to the graduate music program.

MUS 791 Introduction to Music Research 3(3-0)
An overview of scholarly research techniques in music. Prerequisite: admission to the graduate music program.

MUS 793 Research Project in Music Education 2(Spec)
Qualitative, quantitative, or action research coordinated with a music education faculty member. Prerequisites: Admission to the graduate music program.

MUS 795 Psychology of Music Teaching and Learning 3(3-0)
Psychological foundations of music instruction, perception, response, and learning. Prerequisite: admission to the graduate music program.

MUS 797 Special Topics 1-6(Spec)
This course is repeatable. Prerequisite: Admission to the graduate music program.

Applied Music (Private Instruction)
Students may earn credit for private instruction in the various areas of applied music as follows:

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<tr>
<th>Curriculum</th>
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<th>Maximum Hours</th>
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<td>8</td>
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<tr>
<td>Master of Arts</td>
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(Music concentration)

There is a special fee of $40.00 for one-credit-hour lessons and $75.00 for two- and four-credit-hour lessons. This fee is in addition to the regular tuition fees.
Department of Philosophy and Religion (PHL, REL)
College of Humanities and Social & Behavioral Sciences

Guy M. Newland, Chairperson
102 Ansprech (989) 774-3793

James B. Coleman, Ph.D., Ethics
Gary Fuller, B.Lit., Philosophy of Mind
Hugh T. Halman, Ph.D., Islam
Roger D. Hatch, Ph.D., Religion and Society
Hope May, Ph.D., Ancient Philosophy
John Meixner, Ph.D., Philosophy of Science, Logic
Marilyn E. Mowrey, Ph.D., Ethics and Feminist Thought
Guy M. Newland, Ph.D., History of Religions, Tibetan Buddhism
Robert Noggle, Ph.D., Ethics
William W. Reader, Th.D., Biblical Studies, Greek
Mark Shelton, Ph.D., Ethics
David L. Smith, Ph.D., Modern Religious Thought
Greg Spinner, Ph.D., Judaism, History of Religions
Robert Stecker, Ph.D., Aesthetics
John Wright, Ph.D., History of Modern Philosophy 18th Century

Course Descriptions: PHL

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. This course may be offered in an online or hybrid format. Prerequisite: junior status.

PHL 525 Philosophical Problems of the Self 3(3-0)
Advanced study of central philosophical questions about persons, such as mind-body problem, the nature of personal identity, and the freedom of the will. Prerequisites: PHL 100.

PHL 597 Special Topics in Philosophy 1-12(Spec)
Study of areas in philosophy not included in courses currently listed in catalog. Prerequisite: permission of instructor.

PHL 598 Readings in Philosophy 1-6(Spec)
Selected studies of one or more philosophic works. Prerequisite: permission of instructor.

Course Descriptions: REL

REL 501 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. May be offered as Writing Intensive. Prerequisites: 9 credit hours in Religion.

REL 505 Research Seminar 3(3-0)
A seminar supporting research projects in religion, primarily intended for seniors who are religion majors. May be offered as Writing Intensive. Prerequisite(s): 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.

REL 642 African-American Sacred Song 3(3-0)
Study of nature and function of African-American sacred singing from spirituals to contemporary gospel. Singing will be examined in historical context with varied theoretical approaches. Prerequisites: a Bachelor’s degree from an accredited college. No prior knowledge of music theory required.

Department of Physical Education and Sport (PES, PED)
The Herbert H. and Grace A. Dow College of Health Professions

H. Ray Allen, Chairperson
Health Professions Building 2234; (989) 774-6679
E-mail: allen1hr@cmich.edu

H. Ray Allen, Ph.D., Pedagogy
Judy P. Chandler, Ph.D., Special Physical Education
Scott Hirko, Ph.D., Sport Management
Margaret Keiper, Ph.D., Sport Management
Marcia J. Mackey, Ph.D., Sport Management
Vincent E. Mumford, Ed.D., Sport Management
Tracy W. Olrich, Ph.D., Motor Learning, Psychology of Sport

The Department of Physical Education and Sport offers a Master of Arts in Sport Administration.

Master of Arts (M.A.) in Sport Administration
Minimum Totals for Graduation: 36 hours

This is a 36-hour graduate program designed specifically to meet the National Association for Sport and Physical Education-North American Society for Sport Management standards for accreditation.

The master’s degree in sport administration is designed to prepare the student for a career in administration in a sport-related field. The program is flexible and designed to provide both theoretical and practical experience that will meet the needs and interests of the individual.

This degree is accredited by the Commission on Sport Management Accreditation (COSMA)

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Admission Requirement Snapshot
GPA: 3.0
Entrance Exam: N/A
Internal Application Deadline: July 1 (Fall), Oct.1 (Spring)
See Admission Requirement Details Below

Admission
To be considered for admission to the Master of Arts in Sport Administration degree program, a student must meet the general requirements for admission to Graduate Studies at CMU.

In addition, the applicants for the MA in Sport Administration must submit three letters of recommendation, and a resume, along with all other application materials. Based upon the undergraduate GPA, resume, professional experience, and the three letters of recommendation, the candidate may be accepted for regular or conditional admission. For regular admission, the minimum undergraduate GPA must be 3.0 or higher on a 4.0 scale.

Degree Requirements
Required Courses (30-36 hours)

Required Courses I

Required Courses II

Required Courses III

Required Courses IV
Course Descriptions: PES

PES 508 Education on Sexual Aggression for School/Community (3 Spec)
This course addresses the realities of sexual aggression, and how schools, communities, and organizations 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 (3-0)
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 (3-0)
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 560 Principles and Foundations of Coaching (3-0)
Practical and relevant information that is appropriate for interscholastic coaches. Includes eligibility for Coaches Advancement Program (C.A.P) certification. Prerequisites: 56 hours of course credit.

PES 564 Sport Governance: Ethics, Morals, and Values (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. Prerequisite: Minimum 86 credits (senior status); 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)
Study of the theoretical and practical aspects of coaching baseball. Prerequisite: Permission of the instructor.

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 individuals. 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.

PES 602 Sport Event Management: Theory & Application (3 Spec)
An introduction to the theoretical basis of sport management combined with supervised experiences in sport event management. This course may be offered in an online or hybrid format. Credit may not be earned in both PES 602 and PES 690.

PES 603 Administration of Sport (3-0)
A study of administrative techniques and administrative problems related to sport. This course may be offered in an online or hybrid format.

PES 605 Motor Learning and Human Performance (3-3-0)
Factors that make for successful motor performance, including learning theory, distribution and type of practice, developmental factors, and psychological factors.

PES 607 Physical Education Curriculum Analysis (3-0)
Students will be provided a framework for improving and analyzing K-12 programs. Planning, implementing, improving, and redesigning curricula will be emphasized.

PES 610 Philosophy of Physical Education and Sport (3-0)
Philosophical foundations underlying physical education and sport with emphasis upon the development of a consistent and rational professional philosophy. This course may be offered in an online or hybrid format.

PES 611 Psychology of Sport (3-0)
The psychological dimension in sport as it pertains to the athlete, the coach, and the spectator; the latest psychological findings dealing with the relationship between individuals and sport.

PES 615 Analysis of Teaching in Physical Education (3-3-0)
A comprehensive review and analysis of teaching functions and processes with a particular emphasis on how to improve the instructional behaviors of physical educators.

PES 619 Continuing Registration for Final Research Project (1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

PES 620 Sport - An Interdisciplinary Study (3-0)
An interdisciplinary study in sport in America through an examination of the historical, sociological, and philosophical principles of play, sport, games, and athletics.

PES 625 Facilities for Sport and Physical Education (3-3-0)
Basic planning principles from which guidelines to planning sport & physical education facilities can be established. This course may be offered in an online or hybrid format.

PES 631 Physiology of Exercise (4-3-2)
Physiological basis of human movement and its application to physical training and performance. Identical to HSC 631. Credit may not be earned in more than one of these courses.

PES 640 Sport and the Law (3-3-0)
The Sport Law course is designed to provide the entering professional with a practical and theoretical application of U.S. law to the sport industry. This course may be offered in an online or hybrid format. Prerequisite: PES 670 or HSC 670.

PES 645 Financial Management of Sport (3-3-0)
Application of the fundamental concepts and theories of finance to the field of sport management. This course may be offered in online or hybrid format.

PES 650 Sport Marketing (3-3-0)
Provides a practical and theoretical application of marketing science to all realms of the sport industry. This course may be offered in an online or hybrid format.

PES 660 Biomechanics (3-0)
Study of biological and mechanical aspects of biomechanics including the principles of visual and cinematographic analysis.

PES 670 Research Methods for Physical Education and Sport, Health and Recreation (3-0)
Basic research methods and techniques essential in performing and interpreting scientific studies. Recommended: 6 hours of graduate course work completed prior to enrollment. Identical to HSC 670. Credit may not be earned in more than one of these courses.

PES 672 Statistics for Physical Education and Sport, Health and Recreation (3-0)
Basic descriptive and inferential statistical concepts and techniques commonly encountered in professional literature and essential to teaching and research. This course may be offered in online or hybrid format.

PES 690 Practicum (1-4 Spec)
To give the student professional experience of a supervisory or administrative nature in a public school, educational institution, or community agency. Prerequisite: Master’s degree candidates only. CR/NC only.

PES 691 Independent Study (3 Spec)
A topic is selected, researched and a scholarly paper prepared in consultation with an advisor. CR/NC only. Prerequisite: PES 670.

PES 693 Field Study in Physical Education and Sport (1-6 Spec)
An approved investigation, survey, study, or descriptive observation in some area of physical education or sport, performed off campus. CR/NC only.

PES 696 Seminar in Physical Education (2-2-0)
Individual and group study of problems in physical education. Systematic analysis of individual and committee reports and research contributions on current problems.

PES 698 Thesis (1-6 Spec)
The student develops and completes a research study in a specific area of physical education. CR/NC only. Prerequisite: PES 670 or PES 672. 2 hours may be taken concurrently with PES 670.

PES 699 Sport Management Internship (3-6 Spec)
A capstone experience applying theoretical and practical knowledge in a sport management setting. Prerequisite: Completion of all required and elective courses, except PES 691/698; 3.0 overall GPA; or higher; significant progress toward Plan 8 paper or thesis; and permission of the academic advisor and the sport management internship supervisor.

PES 703 Advanced Independent Reading (1-2 Spec)
An in-depth, scholarly study of a selected phase of physical education or sport through individualized reading.

PES 791 Independent Study (2 Spec)
A topic is selected, researched, and a scholarly paper prepared, in consultation with an advisor. CR/NC only. Prerequisite: PES 670 and permission of instructor.
Department of Physics
(PHY, PHS, AST)
College of Science and Technology

Christopher Tycner, Chairperson
Dow 203, (989) 774-3321
https://centrallink.cmich.edu/academics/sci_tech/physics

Veronica Barone, Ph.D., Computational Physics, Molecular Modeling
Joseph Finkel, Ph.D., Experimental Nuclear Physics, Science Policy
Marco Fornari, Ph.D., Computational Condensed Matter Physics
Mihai Horoi, Ph.D., Theoretical Nuclear Physics, Computational Physics
Koblar A. Jackson, Ph.D., Computational Condensed Matter Physics
Axel Mellinger, Ph.D., Experimental Materials Physics
Juan Peralta, Ph.D., Computational Condensed Matter Physics
Georgios Perdikakis, Ph.D., Experimental Nuclear Physics and Nuclear Astrophysics
Valeri Petkov, Ph.D., Experimental Materials Physics
Matthew Redshaw, Ph.D., Experimental Atomic and Nuclear Physics
Andrzej Sieradzan, Ph.D., Experimental Atomic Physics
Christopher Tycner, Ph.D., Observational Astrophysics
Glen Williams, Ph.D., Theoretical Astrophysics

The Central Michigan University Department of Physics offers the Master of Science in physics for students who are interested in careers in business, industry, and government as well as for those preparing to teach at the undergraduate level, or for those considering doctoral work in physics or a related area such as materials science or astronomy. Classes are small, and students have the opportunity for close supervision and individual attention. Graduate research assistantships are available in several research areas, in addition to graduate teaching assistantships and fellowships. In past years, most graduate students in the Department of Physics have received financial support.

Department faculty members are active in the following areas of research: astrophysics, atomic physics, computational physics, condensed matter physics, materials physics, nuclear physics, observational astronomy, and science education. Collaborative research efforts exist with other CMU departments, and researchers at other universities and at national laboratories. A biweekly seminar series brings experts with varied research interests to campus.

The department is housed in the Leon A. and Frances M. McDermott wing of the Dow Science Center. The laser laboratory is presently equipped to perform fluorescence lifetime studies and Doppler-limited spectroscopy, as well as atom cooling experiments. The polymer physics laboratory has equipment to measure rheological properties of polymer fluids and melts. The condensed matter laboratory is designed to study the electrical properties of electret polymer films. The X-ray diffraction laboratory is equipped to study the structure of both crystalline and amorphous materials. The Brooks Astronomical Observatory is equipped for CCD photometric observations, optical spectroscopy, and general visual observing. Support facilities include electronics and machine shops, both staffed by full-time technicians.

Further information about research opportunities can be found on the department website, at www.cmich.edu/colleges/cst/physics/.

Master of Science (M.S.) in Physics

Minimum Totals for Graduation: 30 hours

The requirements for the M.S. in physics are based on a core of 15 semester hours in advanced mechanics, electricity and magnetism, and quantum mechanics. Three hours of seminar are required. In consultation with an advisor, the student selects either Plan A or Plan B for an additional 15 hours. The program is normally completed in two years. There is no qualifying examination, and no foreign language is required.

<table>
<thead>
<tr>
<th>ADMISSION REQUIREMENTS, RETENTION &amp; TERMINATION STANDARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA: 2.7</td>
</tr>
<tr>
<td>Entrance Exam: GRE General &amp; Physics scores recommended</td>
</tr>
<tr>
<td>Internal Application Deadline: July 1 (Fall), Oct.1 (Spring)</td>
</tr>
<tr>
<td>See Admission Requirement Details Below</td>
</tr>
</tbody>
</table>

For admission to the physics graduate program, a bachelor's degree in physics is required with a minimum grade point average in physics of 2.7. An applicant with minor deficiencies may be admitted with the understanding that course work in addition to the usual 30 hours may be required. Students from non-English speaking countries are required to demonstrate proficiency in English via the TOEFL exam. Applicants for graduate assistantships are strongly urged to submit GRE General and Physics scores. A maximum of 24 credits earned during non-degree status may be applied toward a graduate degree in Physics.

Degree Requirements

Required Core Courses (15 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 624</td>
<td>Advanced Mechanics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>PHY 634</td>
<td>Advanced Electricity and Magnetism</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>PHY 643</td>
<td>Quantum Mechanics I</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>PHY 644</td>
<td>Quantum Mechanics II</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>PHY 685</td>
<td>Seminar: Contemporary Physics</td>
<td>1-4(Spec)</td>
</tr>
</tbody>
</table>

Note: 3 hours of Seminar are required for graduation.

Plan Option (15 hours)

Select one of the following plans:

Plan A (Thesis Option)

Select PHY 798 for a total of six hours; plus 3-9 hours of electives from AST 562, AST 563, or any PHY courses at the 500 level of above; and 0-6 hours of cognate courses (which may be chosen to meet the individual needs of the student, but must be in a discipline closely related to the area of specialization.

PHY 798 - Thesis 1-6(Spec)

Plan B (Non-Thesis Option)

Select 9-15 hours of electives from AST 562, AST 563, or any PHY courses at the 500 level or above; plus 0-6 hours of cognate courses (which may be chosen to meet the individual needs of the student, but must be in a discipline closely related to the area of specialization). In addition, students must submit a Plan B paper, approved by the Physics graduate committee, which discusses their research, independent study, or internship.

Total: 30 semester hours

Ph.D. in the Science of Advanced Materials

This is an interdisciplinary degree. Please see the index for the page number.
Course Descriptions: PHY

PHY 505 Teaching Chemistry and Physics in the Secondary School 3(3-0)
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 or CHM 161; PHY 131 or PHY 146; admission into the Teacher Education Program; signed major or minor in chemistry, physics, or chemistry-physics (secondary education); Junior standing. Graduate students must be enrolled in a teaching masters program.

PHY 507 Field Experience in Teaching Chemistry/Physics 1(Spec)
Supervised experience in high school chemistry and/or physics classes. Experience will include observation, participation in instruction, and critical analysis of the experience. Identical to CHM 507. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Students must be accepted into the Teacher Education Program and have Junior or Senior standing. Graduate students must be enrolled in a teaching masters program. Pre/Co-requisite: CHM 505 or PHY 505.

PHY 517 Computational Physics 3(3-0)
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: PHY 312, PHY 322, and PHY 332. Pre/Co-Requisite: PHY 442. Recommended: A basic knowledge of a programming language such as FORTRAN.

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.

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. Prerequisite: PHY 332.

PHY 556 Solid State Physics 3(3-0)
Atomic, molecular and crystal structure, energy levels of electrons, and binding energies in molecules and solids. Prerequisites: PHY 442 Co-requisites: PHY 450.

PHY 578 Experimental Physics 2(0-6)
Selected experiments utilizing the techniques of modern experimental physics. Prerequisite: PHY 277.

PHY 580 Special Topics 1-9(Spec)
Topics not ordinarily covered in regular courses. Prerequisite: permission of instructor.

PHY 614 Methods of Theoretical Physics 3(3-0)
Application of advanced mathematical techniques to physical theory. Prerequisite: PHY 313.

PHY 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

PHY 624 Advanced Mechanics 3(3-0)
Special relativity, kinematics, and dynamics of rotational motion, coupled oscillations, canonical transformation, Hamilton-Jacobi theory, classical fields. Prerequisite: PHY 322.

PHY 634 Advanced Electricity and Magnetism 3(3-0)
Boundary value problems, time-varying fields and the initial value problem. Covariant description of electrodynamics and radiation by point charges. Prerequisite: PHY 332.

PHY 643 Quantum Mechanics I 3(3-0)
The scattering matrix formulation of quantum mechanics, symmetry groups in quantum mechanics, perturbation theory. Prerequisite: PHY 442.

PHY 644 Quantum Mechanics II 3(3-0)
Identical particles, the self-consistent field, theory of multiplets, semiclassical theory of radiation, atomic collisions. Prerequisite: PHY 643.

PHY 685 Seminar: Contemporary Physics 1-4(Spec)
Discussion of recent research in various subfields of physics. Emphasis on oral presentation and literature searches. Offered in 1 hour blocks, but may be retaken three times. Prerequisite: graduate standing in physics.

PHY 780 Topics in Physics 1-9(Spec)
Topics not ordinarily covered in regular courses. Prerequisite: one course at 500 or 600 level.

PHY 790 Independent Study 1-3(Spec)
Individual study in an area not covered by regular courses. Prerequisite: Prior permission of instructor must be obtained.

PHY 798 Thesis 1-6(Spec)
Individual research, with thesis. Directed by a committee. CR/NC only.
Central Michigan University has the following goals:

• preparing students for entrance into Ph.D. programs in Political Science, entrance into law schools, entrance into public service, or for upgrading their credentials for careers in teaching, including primary and secondary education;
• developing students’ ability to critically analyze and evaluate scholarly work;
• fostering students’ ability to think critically and effectively express their thoughts in written and oral communication;
• encouraging and mentoring students’ professional growth through research and presentations at professional conferences;
• providing opportunities to network within the field of study through internships, honorary organizations and on-campus events.

Admission Requirements, Retention & Termination Standards

1. An undergraduate grade point average of at least 2.8 (on a 4.0 point scale).
2. A minimum of 18 undergraduate hours in the social sciences of which at least 6 hours are in political science.
3. An essay (two or three pages, double-spaced) including a discussion of the applicant’s professional and/or educational goals and how completion of the program will facilitate his or her achievement of those goals. This essay replaces the written statement requested as part of the Office of Research and Graduate Studies application.
4. Two letters of recommendation from college faculty or other professionals who are familiar with the applicant’s abilities and can attest to the applicant’s potential to succeed in the program.
5. Evidence of successful completion of an undergraduate statistics or social science research methods course.
6. If the applicant is an international student for whom English is not the first language, a score of 213 on the computer-based (or 550 on the written-based) Test of English as a Foreign Language (TOEFL).
7. Per university policy, conditional admission may be considered for applicants with backgrounds or grade point averages that do not meet these requirements. Courses taken to meet these requirements may not be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all conditional requirements.
8. Up to 9 semester hours of graduate credit may be transferred from another institution with approval of the advisor and the Vice President/Dean of the Office of Research and Graduate Studies.

Program Requirements

The student must complete a minimum of 33 hours according to the plan of study below. At least 15 of the hours presented for the degree must be in courses at or above the 600 level.

The student must complete the required core courses (24 hours); one elective course at the 600 or 700 level (3 hours); and either the Plan A Thesis (6 hours) or the Plan B non-thesis option (6 additional hours of course work selected in consultation with an advisor).

Required Courses (24 hours)

PSC 514 - American Public Policy Making 3(3-0)
PSC 520 - American National Government and Politics 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
PSC 551 - Seminar in International Relations 3(3-0)
PSC 680 - Methodology of Political Research 3(3-0)
PSC 682 - Techniques of Political Research 3(3-0)
PSC 740 - Seminar in Comparative Politics 3(3-0)
PSC 770 - Justice, Freedom, Equality: Essential Political Ideas 3(3-0)
Plan Option (6 hours)

Select one of the following courses:

- PSC 515 - Comparative Public Policy 3(3-0)
- PSC 516 - Environmental Politics and Policy 3(3-0)
- PSC 555 - International Law I 3(3-0)
- PSC 556 - International Law II 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)
- PSC 583 - Survey Research 3(3-0)
- PSC 585 - Public Sector Information Technology Management 3(3-0)
- PSC 610 - Foundations of Public Administration 3(3-0)
- PSC 615 - Politics and Regulation of Health Care Policy 3(3-0)
- PSC 642 - Problems and Processes of International Development 3(3-0)
- PSC 651 - Comparative Political & Economic Systems 3(3-0)
- PSC 661 - Administration and Policy in American State Government 3(3-0)
- PSC 761 - Seminar in American State Government 3(3-0)
- PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)

Plan A - Thesis (6 hours)

Thesis and Oral Defense

Students selecting Plan A are required to complete a Thesis. In their final semester of graduate coursework, students must enroll in Thesis (PSC 798). Prior to the final semester, the student shall form a Master’s Thesis Committee, including a Chair and two additional members, complete and submit a prospectus, and schedule a defense date. The Thesis must be a complete significant original scholarly work. This Committee shall determine whether the completed thesis is satisfactory for permanent filing. In addition, students will be required to complete an oral defense of their thesis before the Committee.

PSC 798 - Thesis 1-6(Spec)

Plan B - Non-Thesis Option (6 hours)

Two papers and oral defense

Students completing the Plan B are required to take 6 additional hours of coursework and present revisions of two seminar papers as evidence of scholarly achievement. Although students planning to continue their studies in pursuit of a Ph.D. in Political Science are strongly advised to pursue the Plan A option, the Department also offers a Plan B option for those students who expect the M.A. to be their terminal degree. The Plan B option requires students to:

1. complete 6 additional hours of graduate coursework (in lieu of 6 hours of Thesis Writing); and
2. submit two research papers as evidence of scholarship. These papers must be prepared in connection with a seminar, an independent research course, or a graduate-level course in the Department of Political Science and Public Administration. Before a student’s final semester, the student shall form a Plan B Paper Committee, including a Chair and two additional members. This Committee shall determine whether the submitted papers are satisfactory for permanent filing. Satisfactory papers must demonstrate substantial revisions from the final version submitted at the close of the seminar, independent research course, or graduate-level course in the Department of Political Science. Students will provide a cover letter for each research paper that describes the type and extent of revisions undertaken. This cover letter should provide a point-by-point response to any concerns raised by the instructor, as well as a clear description and explanation of additions made to the paper. In addition, students will be required to complete an oral defense of each of these papers before the Committee. A minimum of 20-25 pages for each paper is suggested.

ACCELERATED MASTER OF ARTS IN POLITICAL SCIENCE

Eligibility Standards

Students who meet the following criteria are eligible to apply to the accelerated program:

1. Signed major in political science.
2. Enrolled in last semester of junior status.
3. Completion of at least 15 political science credits, not including internship and CR/NC courses.
4. Completion of PSC 280 Introduction to Empirical Methods of Political Science with a grade of B+ or higher.
5. Per university policy, conditional admission may be considered for applicants with backgrounds or grade point averages that do not meet these requirements. Courses taken to meet these requirements may not be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all conditional requirements.

Admission Requirements

Students must apply for admission to Graduate Studies at CMU during the last semester of their junior undergraduate year. Students must meet the requirements for admission to the Master of Arts in Political Science degree and to Graduate Studies. In addition, students should also have completed university competency requirements. If admitted, graduate status is conferred in the senior year after the student has completed at least 86 undergraduate credit hours with a cumulative undergraduate grade point average of at least 3.25 or a grade point average of 3.25 in political science coursework.

Program Requirements

Three to twelve (3-12) hours of graduate PSC credit (500 and 600 level courses) leading to the Master of Arts degree in Political Science may be taken in the final year of undergraduate work.

Master of Public Administration (M.P.A.)

Minimum Totals for Graduation: 36 hours

Program Director: Dr. Thomas Greitens, 989-774-3862; greit1t@cmich.edu

Mission Statement

The NASPAA-accredited Master of Public Administration program at Central Michigan University provides a professional degree to prepare students to assume or advance in careers in the public and non-profit sectors. The program focuses on developing critical thinking, analytical skills, and an appreciation for ethical decision making. The program maintains a commitment to the recruitment and education of a diverse student body, and the recruitment and professional development of a diverse faculty. Consistent with the University’s mission, the program, through collaboration with Global Campus, offers the degree to underserved communities in select locations served by CMU.

Accordingly, MPA-CMU has the following goals:

- Graduating well qualified professionals who will assume careers in the public and non-profit sectors.
- Graduating well-qualified, mid-career professionals who will be prepared to advance in careers in the public and non-profit sectors.
- Balancing practical learning with the current theories of management, leadership, and administration.
- Providing a systematic understanding of political, economic, and social issues facing public administrators.
- Developing quantitative, analytical, and information and technology skills required for current and future work in the public and non-profit sectors.
- Offering students professional development opportunities through internships and applied research in the public and non-profit sectors.
- Developing core competencies in problem solving skills, policy analysis, legal and constitutional frameworks, and management of a diverse workforce.
- Growing the MPA program for an off-campus audience through traditional and non-traditional delivery modes.

(Continued)
Program Requirements

The requirements for the MPA degree consist of 36 hours of course work.

First, completion of a set of core courses presents an understanding of essential components of the discipline. Then, with the approval of an advisor, the student creates a degree emphasis in one of three ways:

a. by selecting a specific concentration in either Public Management or State and Local Government;

b. by selecting a set of general elective courses; or

c. by selecting a set of cognate courses focused on a particular subject area. Using this last method, MPA students have developed emphases in such areas as Planning and Land Use, Health Administration, and Recreation Management by incorporating courses from other departments, again with the approval of an advisor. Advisors may make substitutions to the course requirements to fit the student’s focus and the availability of course work.

The pre-service student will also complete an internship of 3 hours (PSC 795) in place of an elective course.

Before enrollment in PSC 796, Applied Research in Public Administration, a student, in conjunction with their advisor and faculty, develops an approved research topic for the Applied Research Project. The student will present his or her project as part of the PSC 796 course guidelines.

The student will present his or her finished paper to the committee when completed. Both on-campus and Global Campus students are encouraged to develop their research topics through the tutelage of the entire teaching staff.

Degree Emphasis (9-12 hours)

Choose from one of the following four options:

Cognate Courses Option (9-12 hours)

With the approval of an advisor, a student may create an emphasis in a subject area by selecting from 9 to 12 hours of cognate course work in place of the general electives. A cognate course is one outside of but related to the principal discipline of Public Administration.

Public Management Concentration (9-12 hours)

Public Management Concentration (9-12 hours)

With the approval of an advisor, a student may create an emphasis in a subject area by selecting from 9 to 12 hours of cognate course work in place of the general electives. A cognate course is one outside of but related to the principal discipline of Public Administration.

General Electives (9-12 hours)

Public Management Concentration (9-12 hours)

With the approval of an advisor, a student may create an emphasis in a subject area by selecting from 9 to 12 hours of cognate course work in place of the general electives. A cognate course is one outside of but related to the principal discipline of Public Administration.

State and Local Government Concentration (9-12 hours)

State and Local Government Concentration (9-12 hours)

With the approval of an advisor, a student may create an emphasis in a subject area by selecting from 9 to 12 hours of cognate course work in place of the general electives. A cognate course is one outside of but related to the principal discipline of Public Administration.
Graduate Certificate in Citizen Engagement

Minimum Totals for Graduation: 18 hours

The 18 credit-hour graduate certificate in Citizen Engagement is designed to provide awareness of trends in engagement in public life, as well as training in how to enhance citizens' participation in democratic processes, civil society and political institutions. The program includes required courses and electives. Students seeking the certificate must hold a completed baccalaureate degree or have acceptance into a graduate degree program at CMU.

Upon completion of the certificate program, students will be able to:
- Assess the current state of citizen participation in public life.
- Evaluate factors that affect citizens' willingness and ability to participate in public life.
- Identify citizen engagement techniques used by government to enhance authentic participation in democratic processes, civil society and political institutions.
- Identify the techniques used by citizens and advocacy groups to engage their community, political groups, and governmental institutions.
- Demonstrate the ability to effectively use techniques that promote deliberation and democratic decision-making.
- Use social science research methods to assess the effectiveness of various citizen engagement techniques.

Required Courses (12 hours)

- PSC 513 - Citizen Engagement in Public Life 3(3-0)
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 583 - Survey Research 3(3-0)
- PSC 680 - Methodology of Political Research 3(3-0)
- PSC 682 - Techniques of Political Research 3(3-0)
- PSC 794 - Practicum in Public Polling 1-6(Spec)

Electives (6 hours)

Select two courses from one of the following categories:

Electives I - Public Opinion Polling (0-6 hours)

Select PSC 794 for three (3) hours and one other course:
- PSC 583 - Survey Research 3(3-0)
- PSC 680 - Methodology of Political Research 3(3-0)
- PSC 682 - Techniques of Political Research 3(3-0)
- PSC 794 - Practicum in Public Polling 1-12(Spec)

Electives II - Elected Institutions and Processes (0-6 hours)

Select two courses:
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 520 - American National Government and Politics 3(3-0)
- PSC 661 - Administration and Policy in American State Government 3(3-0)
- PSC 761 - Seminar in American State Government 3(3-0)

Note: Select 3 credits of PSC 661 OR 761, not both.

Electives III - Appointed Institutions and Processes (0-6 hours)

Select two courses:
- PSC 585 - Public Sector Information Technology Management 3(3-0)
- PSC 610 - Foundations of Public Administration 3(3-0)
- PSC 713 - Public Budgeting and Finance 3(3-0)
- PSC 773 - Administration and Ethics in Public Service 3(3-0)

Total: 18 semester hours

Graduate Certificate in Professional Development in Public Administration

Minimum Totals for Graduation: 15 hours

The 15 credit hour certificate is designed for regularly admitted graduate students who desire advanced training in the field of public administration, but who are not seeking a master's degree at this time. Credits successfully earned with the certificate program can be transferred toward the MPA degree. Students may substitute courses only upon approval of the Public Administration Council. Admission is through the Office of Research and Graduate Studies. Students pursuing this certification program should have a background in political science, public administration, economics, social work, criminal justice or any other administration related field.

Required Courses (15 hours)

- PSC 585 - Public Sector Information Technology Management 3(3-0)
- PSC 711 - Public Personnel Administration Practice 3(3-0)
- PSC 713 - Public Budgeting and Finance 3(3-0)
- PSC 714 - Program Analysis and Evaluation 3(3-0)
- PSC 775 - Organization Theory in Public Administration 3(3-0)

Total: 15 Semester Hours

Master of Arts (M.A.) or Graduate Certificate in Cultural Resource Management

These programs are interdisciplinary. Please see the index for the page number.

Course Descriptions: PSC

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. 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. This course is approved for offering in a distance learning format.

PSC 515 Comparative Public Policy 3(3-0)

This course examines trends in Americans' participation in public life, as well as training in how to enhance citizens' participation in democratic processes, civil society and political institutions. The program includes required courses and electives. Students seeking the certificate must hold a completed baccalaureate degree or have acceptance into a graduate degree program at CMU.

PSC 516 Environmental Politics and Policy 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. Prerequisites: a minimum of 9 hours of political science coursework, including PSC 105.

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. Prerequisite: PSC 523 Fundamentals of Grant Writing and Management 3(3-0)

PSC 540 Cultural Heritage and Politics of Eastern Europe 3(3-0)

Comparative study of political systems of Soviet bloc countries and Yugoslavia. Prerequisite: Graduate standing or completion of 56 credit hours.

PSC 551 Seminar in International Relations 3(3-0)

Significant aspects of international relations on the basis of timeliness and importance. This course is approved for offering in a distance learning format.

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 examines the major theoretical frameworks used in the study of American national government and politics and survey current research in the area. Prerequisites: a minimum of 9 hours of political science coursework, including PSC 105.

PSC 583 Survey Research 3(3-0)

This course examines trends in Americans' participation in public life, as well as training in how to enhance citizens' participation in democratic processes, civil society and political institutions. The program includes required courses and electives. Students seeking the certificate must hold a completed baccalaureate degree or have acceptance into a graduate degree program at CMU.

PSC 661 Administration and Policy in American State Government 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. This course is approved for offering in a distance learning format.

PSC 711 Public Personnel Administration Practice 3(3-0)

This course examines trends in Americans' participation in public life, as well as training in how to enhance citizens' participation in democratic processes, civil society and political institutions. The program includes required courses and electives. Students seeking the certificate must hold a completed baccalaureate degree or have acceptance into a graduate degree program at CMU.

PSC 713 Public Budgeting and Finance 3(3-0)

This course examines trends in Americans' participation in public life, as well as training in how to enhance citizens' participation in democratic processes, civil society and political institutions. The program includes required courses and electives. Students seeking the certificate must hold a completed baccalaureate degree or have acceptance into a graduate degree program at CMU.

PSC 775 Organization Theory in Public Administration 3(3-0)

This course examines trends in Americans' participation in public life, as well as training in how to enhance citizens' participation in democratic processes, civil society and political institutions. The program includes required courses and electives. Students seeking the certificate must hold a completed baccalaureate degree or have acceptance into a graduate degree program at CMU.
PSC 563 Politics and Policy in Urban Communities 3(3-0)
Examination of large and small city governments. Their political process, behav-
ior 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 571 The Military and Politics 3(3-0)
This course examines the role of the armed forces in politics. Theories about
military-civilian relations, rules of etiquette, and transitions to democracy will be ana-
lyzed. May be offered as 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 585 Public Sector Information Technology Management 3(3-0)
To teach public administrators applied management techniques for public
sector information systems, and the computer's role in the management of infor-
mation in a democracy. Prerequisites: PSC 210; 16 semester hours of completed or
graduate status.

PSC 590 Independent Study 1-6(Spec)
Prerequisite: Open to majors or minors who have completed at least 12 hours
of political science with a B average; arrange with department chairperson and
instructor.

PSC 598 Special Topics in Political Science 1-12(Spec)
Subject matter not included in courses currently listed in Bulletin.

PSC 610 Foundations of Public Administration 3(3-0)
Overview of major themes of modern public administration, including adminis-
trative theories and processes, democratic environments, administrative functions
and activities, and analytical tools and concepts.

PSC 615 Politics and Regulation of Health Care Policy 3(3-0)
Explore external environments in which health care systems operate, political
determinants of health care policy, politics of bureaucracy, social and economic
demands placed upon the system.

PSC 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program
credits but still need to use university resources to complete their degree
requirements.

PSC 620 Nonprofit Management 3(3-0)
Introduction to the fundamentals of managing organizations in the nonprofit
sector.

PSC 621 Board Governance and Executive Leadership 3(3-0)
This course is designed to introduce students to the fundamentals of gover-
nance, trusteeship, and executive leadership in nonprofit sector organizations.

PSC 623 Public Policy Processes and Evaluation 3(3-0)
This course provides an introduction to the professional practice of policy
analysis.

PSC 642 Problems and Processes of International Development I 3(3-0)
Impact of modernization and industrialization upon emerging countries and
nation-building processes.

PSC 651 Comparative Political & Economic Systems 3(3-0)
An introduction to comparative political and economic systems. How politics
and economics interact in theory, as well as in concrete political-economic interac-
tions of nations. Prerequisite: PSC 351.

PSC 655 Managing Modern Local Government 3(3-0)
Overview of major themes and issues confronting the management of local
government.

PSC 661 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.

PSC 675 Public Sector Emergency and Crisis Organizational Theory 3(3-0)
Analysis of organizational theory as applied to public sector emergency and
crisis management. Emphasis on structure, behavior, networks, and leadership.
Prerequisites: Admission to the MPA program.

PSC 676 Emergency and Crisis Prevention, Preparedness and Response 3(3-0)
Analysis of public sector capacity in the four operational phases of emergency
and crisis management: prevention, preparedness, response and recovery.
Prerequisites: Admission to the MPA program.

PSC 677 The Public Sector Role in Post-Disaster Recovery 3(3-0)
Analysis of the emergency and crisis management considerations necessary to
restoration of public services following a disaster. Prerequisites: Admission to the
MPA program.

PSC 680 Methodology of Political Research 3(3-0)
This course focuses on the advanced study of the logic and methods of scientific
research in political science. Recommended: PSC 280; or SOC 200 and SOC 350.

PSC 681 Qualitative Research in Political Science and Public Administration 3(3-0)
Overview of theoretical approaches to qualitative research in political science
and public administration. Prerequisite: PSC 680.

PSC 682 Techniques of Political Research 3(3-0)
This course focuses on regression analysis in political science and how to apply
such methods to scholarly research. Prerequisites: PSC 680.

PSC 711 Public Personnel Administration Practice 3(3-0)
Emphasizes skill development in selected areas of public personnel administra-
tion, including: personnel evaluation, collective bargaining, affirmative action, and
human resource planning and development. This course is approved for offering in
a distance learning format.

PSC 712 Implementation and Reform of Public Programs 3(3-0)
Examination of the major administrative reforms in the public sector and their
consequent impact on the implementation of programs and projects.

PSC 713 Public Budgeting and Finance 3(3-0)
Advanced study of public budgets and processes. Emphasizes the political
nature of budget preparation, adoption, administration and evaluation at various
levels of government.

PSC 714 Program Analysis and Evaluation 3(3-0)
Methodology of analyzing and evaluating public programs. Design and use
of quantitative and qualitative techniques for predicting and measuring performance.

PSC 730 Public Service Competencies 1(Spec)
Overview and assessment of the competencies needed to be an effective
administrator in the public sector. CR/NC only. Prerequisite: A minimum of 21
hours of required MPA courses completed.

PSC 740 Seminar in Comparative Politics 3(3-0)
Examination of the specific approaches and methods of comparative political
analysis.

PSC 751 Seminar in American Government 3(3-0)
Study and research in the major theories of public administration and the process of state

PSC 770 Justice, Freedom, Equality: Essential Political Ideas 3(3-0)
The history of political ideas in the Western world, with a focus on justice, free-
dom, and equality. Authors include Plato, Aristotle, Machiavelli, Locke, and Marx.
This course may be offered in an online or hybrid format.

PSC 773 Administration and Ethics in Public Service 3(3-0)
This course examines ethical problems faced by participants in a modern
administrative system with a focus on their sources and on methods for resolving
them.

PSC 774 Strategic Planning for Public/Non-Profit Organizations 3(3-0)
Study of strategic planning process and documents in public and no-profit
organizations. Develop and critique strategic plans, goals, and information pro-
cesses. Recommended: PSC 713 or PSC 714.

PSC 775 Organization Theory and Behavior 3(3-0)
The study of the appropriate design structures for administering complex orga-
nizations in the public sector with an emphasis on management, decision-making,
and planning.

PSC 780 Public Sector Research Methods 3(3-0)
Exploration of research methods used in governmental and public sector
organizations.

PSC 785 Advanced Readings I 1-6(Spec)
Prerequisites: Permission of instructor.

PSC 793 Practicum in Citizen Engagement 1-12(Spec)
This course provides experiential learning in a variety of leadership techniques
intended to facilitate citizen engagement in public decision making. CR/NC only.
Prerequisite: Permission of instructor.

PSC 794 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. Prerequisite: Permission of
instructor.

PSC 795 Internship in Public Administration 1-6(Spec)
An integrative learning experience where students apply textbook knowl-
edge to public administration and public affairs work experience. CR/NC only.
Prerequisite: permission of instructor.

PSC 796 Applied Research in Public Administration 3(3-0)
Work experience in administration in a public agency is utilized in the course for
an applied research project to integrate the practical and theoretical contributions.

PSC 798 Thesis 1-6(Spec)
CR/NC only. Prerequisite: written permission of advisor and department chairperson.
Department of Psychology (PSY)
College of Humanities and Social & Behavioral Sciences

Katrina Rhymer, Chairperson
101 Sloan Hall (989) 774-3001

Jane Ashby, Ph.D., University of Massachusetts. Cognitive psychology
Renee Babcock, Ph.D. Georgia Institute of Technology. Adult development and aging, age differences in memory.
Richard Backs, Ph.D., University of Southern California. Human factors, psychophysiology, aging, attention, emotion.
Terry Beehr, Ph.D., University of Michigan. Job stress, retirement, leadership, careers.
Neil Christiansen, Director, Industrial/Organizational Psychology, Ph.D., Northern Illinois University. Personality and work, racism and social judgments, attitudes toward affirmative action.
Stephen Colarelli, Ph.D., New York University. Industrial/Organizational psychology, evolutionary psychology
Christopher Davoli, Ph.D., Washington University. Perception, history and systems. Visual attention and perception, embodied cognition, peripersonal space, action, tool-use, visual learning and memory, visual search, eye-tracking, emotional processing, cognitive aging and individual differences.
Daniel Drevon, Ph.D., Central Michigan University. Academic and behavioral interventions based on applied behavior analysis, single-case design, psychosocial assessment
Gary Dunbar, Director, Neuroscience Program, Ph.D., Clark University. Behavioral neuroscience, stem cell and pharmacological treatment of brain damage and neurodegenerative diseases
Bryan Gibson, Ph.D., University of Utah. Self presentation, smoker-nonsmoker interaction, psychology of gambling
Kyunghie Han, Director, Experimental Psychology, Ph.D., University of Minnesota. Scientific study of culture, quantitative methods, psychological test/scala development and evaluation
Timothy Hartshorne, Ph.D., University of Texas at Austin. Low-incidence disabilities, CHARGE syndrome, deafblindness, disability and the family, parent-professional relationships, therapeutic interventions, issues around loss
Michael Hixson, Director, School Psychology, Ph.D., Western Michigan University. Behavior analysis, direct instruction, precision teaching, behavior development, curriculum-based measurement
Melvin W. Jaffa, Ph.D., Columbus University. Social cognition, emotionality, interpersonal behavior, eating
Kenneth Jenrow, Ph.D., Oakland University. Electrophysiology, mitigating neuroinflammation and its deleterious effects on synaptic plasticity and cognitive function.
Carly Johnson, Ph.D., Michigan State University. Sleep disorders, applied behavior analysis, organizational behavior management
Yannick Marchalant, Ph.D., universite de Caen, France. Influence of brain aging and neuroinflammatory processes on the development of neurodegenerative diseases.
Elizabeth Meadows, Ph.D., State University of New York at Albany. Anxiety disorders, trauma, prevention of psycho-pathology, psychological and medical problem interventions
Sandra Morgan, Ph.D., Central Michigan University. Academic and behavioral assessment and intervention, pediatric consultation
Larissa Niec, Ph.D., Case Western Reserve University. Children's interpersonal function, impact of out-of-home care on children, child maltreatment, attachment
Kimberly O’Brien, Ph.D., University of South Florida. Occupational Health, job stress, psychometrics and research methods
Hajime Otni, Ph.D., University of Georgia. Human memory and cognition
Kevin Park, Ph.D., University of Illinois at Urbana-Champaign. Molecular genetics and neurobiology of neurodegenerative diseases, preclinical therapeutic development.

Debra Poole, Ph.D., University of Iowa. Basic language/cognitive/social development in children related to social issues, forensic psychology
Matthew Prevette, Ph.D., University of South Florida. Team performance management, personality traits, technology in the workplace
Stuart Quirk, Ph.D., Case Western Reserve University. Emotional response (with a general focus upon psychopathology), emotional regulation through substance use
Mark Reilly, Undergraduate Director, Ph.D., West Virginia University. Experimental analysis of behavior, operand/respondent conditioning, animal learning, quantitative models, behavioral pharmacology, substance abuse
Katrina Rhymer, Ph.D., Mississippi State University. Academic, behavioral, and social/emotional interventions, curriculum-based measurement and single-subject design research
George Ronan, Ph.D., Fairleigh Dickinson University. Personal problem solving, anger/aggression, psychological assessment
Michael Sandstrom, Ph.D., Ohio State University. Assessing brain plasticity, compensatory neuronal activity, or neurochemical control during active behavior at various stages of deteriorative brain diseases such as Parkinson's and Huntington's using animal models
Kyle Scherr, Ph.D., Iowa State University. Psychology and Law
Reid Skeel, Director, Clinical Psychology, Ph.D., University of Florida. Neuropsychology
K. Roger Van Horn, Ph.D., Iowa State University. Human development and developmental changes in cognitive and psychosocial processes
Nathan Weed, Ph.D., University of Minnesota. Assessment of personality and psychopathology, psychometric methods in personality assessment

The Programs
The first graduate degree awarded in psychology at CMU was the Master of Arts in General Psychology in 1967. Since then the department has expanded its programs to include the Master of Science in Experimental Psychology, a Master of Arts in Industrial/Organizational Psychology, a Specialist in Psychological Services in School Psychology, and Doctor of Philosophy degrees in Industrial and Organizational Psychology, Clinical Psychology, School Psychology and Applied Experimental Psychology. These programs have been, and continue to be, successful, with some of its graduates attaining national and international recognition in psychology.

The Department of Psychology maintains a variety of facilities that are used in the education of graduate students. Following is a brief description of those most frequently used within the department and university.

Computer Facilities. A computer lab for graduate students is located in Sloan Hall. There are a total of 18 networked computers (located on the second floor and in the basement) available for testing research participants. Computers are also available at the Health Professions Building for students who are working at the Psychological Training and Consultation Center (PTCC) as well as at the neuroscience and psychophysiology laboratories. Further, each faculty member maintains a lab with a computer, which is used for research purposes.

Human Subjects Laboratories. Space is reserved in Sloan Hall for research with human participants. Special apparatus permits studies in neuropsychology, social psychology, biofeedback, discrimination learning, and perception. A computer with appropriate interfacing helps provide flexibility in instruction and research.

Brain Research and Integrative Neuroscience (BRAIN) Center. The BRAIN Center is a compilation of four state-of-the-art neuroscience laboratories (each with space for two Principal Investigators) located in the Health Professions Building, adjoined by fully-equipped shared core facilities for cellular/molecular neurobiology, behavioral assessments, image analysis and microscopy lab, and computer lab. A fully-equipped animal care facility with surgical suites and necropsy room is adjoined to the BRAIN Center. In addition, a radioisotope room, cold room, and darkroom are available for specialized procedures.
Behavior Analysis Laboratory. The Behavior Analysis Laboratory is located in rooms 201-204 of Rowe Hall. The facilities include both rodent and avian colonies and state-of-the-art environmental control equipment and behavioral testing apparatuses. Operant conditioning chambers are computer controlled and fully equipped with multiple response manipulanda and reinforcer delivery systems, including syringe pumps for drug delivery. The lab is adjacent to a conference area with computer workstations for data analysis. There is also a fully modernized undergraduate student laboratory equipped with operant conditioning stations for use in PSY 384.

Psychological Training and Consultation Center (PTCC). The PTCC Clinic is part of the Psychology Department at Central Michigan University, and serves residents of the mid Michigan area as well as members of the CMU community. Therapists are CMU graduate students in Psychology who provide services under the supervision of Psychology Department faculty. The Clinic is in the Health Professions Building on the CMU campus, located on West Campus Drive between Bellows and Preston in Mt. Pleasant. Psychotherapy for a wide range of adult and child psychological disorders is offered at the Clinic. Psychological testing for problems such as learning disorders and deficits in attention and concentration is also available. In addition, the Clinic offers a number of specialized therapy programs. For further information about any PTCC program, or to request services, the Psychological Training and Consultation Center’s main telephone number is 989-774-3904.

Engineering Psychophysiology Laboratory. Conducts research on the psychophysiology of attention in human performance. The current focus of the laboratory is on attention, distraction, and the use of advanced telematic devices during driving across different populations of drivers (e.g., young vs. old adults, patients with neurological or developmental disorders). A variety of central and autonomic nervous system measures can be collected during driving simulation in this laboratory, including electroencephalographic (dense-array EEG and evoked-related brain potentials), cardiovascular (electro- and impedance cardiography, blood pressure), and pulmonary responses.

DeafBlind Central: Michigan’s Training and Resource Project is a comprehensive statewide technical assistance program funded through the United States Department of Education. The project provides information, training, consultation, and referrals for families and/or professionals who are impacted by, or associated with, a child who has combined vision and hearing loss, often with additional disabilities. Project staff members are also involved with various systems change initiatives. DeafBlind Central is housed in Sloan 105.

CMU Center for Driving Evaluation, Education, & Research (D.E.E.R.). The mission of the CMU D.E.E.R. Center is to provide clinical services to evaluate cognitive fitness to drive, to provide education to drivers with attention disorders is also available. In addition to course work, a student must complete an oral examination over the thesis.

Additional Requirement I (3 hours)
Select one course from the following:
- PSY 511 - Statistics in Psychology 3(3-0)
- PSY 609 - History and Systems of Psychology 3(3-0)
- PSY 690 - Research Seminar: Experimental Psychology 1-3(Spec)
- PSY 798 - Thesis 1-12(Spec)

Note: 2 hours of PSY 690; 6 hours of PSY 798.

Minimum Totals for Graduation: 36 hours

Psychology

The Master of Science degree in Experimental Psychology is based upon the satisfactory completion of a minimum of 36 semester hours of graduate work.

When applying for the Master of Science degree in Experimental Psychology, applicants must send three letters of reference and official GRE scores directly to the Department of Psychology. Fifteen semester hours of undergraduate psychology or the equivalent as determined by the department are required for admission. Students who are deficient in certain subject areas such as statistics (PSY 211) or methodology (PSY 285, PSY 385) will be expected to make up these deficiencies in addition to the normally prescribed graduate course work for the degree. A maximum of nine credit hours earned during non-degree status may be applied toward the MS degree.

Degree Requirements

Required Courses (14 hours)
- PSY 511 - Statistics in Psychology 3(3-1)
- PSY 609 - History and Systems of Psychology 3(3-0)
- PSY 690 - Research Seminar: Experimental Psychology 1-3(Spec)
- PSY 798 - Thesis 1-12(Spec)

Cognate Courses (0-6 hours)
Select one course from the following:
- PSY 587 - Cognitive Psychology 3(3-0)
- PSY 650 - Learning 3(3-0)
- PSY 680 - Sensation and Perception 3(3-0)

Electives (4-10 hours)
To be chosen in consultation with an advisor.

Total: 36 semester hours

Information concerning additional requirements can be obtained by contacting the Experimental MS program director.

Accelerated Master of Science in Experimental Psychology

(Currently enrolled CMU Undergraduate students only)

Advanced undergraduate students majoring in psychology who want to obtain additional training in experimental psychology may want to consider an option by which they can obtain their Bachelor of Science with the General Major in Psychology and their Master of Science in Experimental Psychology in five years. The accelerated program course requirements are identical to the General Major in Psychology and to the Master of Science in Experimental Psychology and allows the student to apply 12 credit hours of graduate coursework toward both their Bachelor of Science and Master of Science degrees.
To be eligible for the accelerated program, students must meet all of the admissions requirements for regular admission to the Master of Science in Experimental Psychology program and have completed at least 84 credit hours of undergraduate coursework, including all General Education, University Program, and competency requirements. It is expected that students will already be engaged in research with a faculty member prior to admission to the accelerated program.

The accelerated Master of Science in Experimental Psychology program is a 12-month program. Students will complete the Bachelor of Science degree requirements and the first year of coursework for the Master of Science by the end of the summer term of their fourth year. Students will complete the coursework for the Master of Science and conduct and defend their thesis by the end of the summer term of their fifth year. A sample curriculum for a student who has completed 84 credit hours of undergraduate coursework is given below. Undergraduate coursework completed beyond 84 credit hours would lead to conferral of the Bachelor of Science degree prior to the end of the summer term in Year Four.

**Sample Curriculum**

**Year Four**

**Fall**

PSY 511 - 3 hours (see Note 1)
Graduate Requirement - 3 hours (See Note1)
PSY 690 - 1 hour (See Note 2)
Undergraduate Courses - 9 hours
Total: 16 hours

**Spring**

Graduate Requirement - 3 hours (See Note 1)
Graduate Requirement - 3 hours (See Note 1)
PSY 690 - 1 hour (See Note 2)
Undergraduate Courses - 9 hours
Total: 16 hours

**Summer**

Undergraduate Courses - 10 hours
Total: 10 hours

Bachelor of Science degree conferred

**Year Five**

**Fall**

Graduate Requirement - 6 hours
Graduate Elective - 3 hours
Total: 9 hours

**Spring**

PSY 798 - 3 hours
Graduate Elective - 3 hours
Total: 6 hours

**Summer**

PSY 798 - 3 hours
Graduate Elective - 4 hours
Total: 7 hours

Master of Science degree conferred

**Note 1:** Courses that apply to both the BS and MS degrees. Required courses are (PSY 511; PSY 609; PSY 611 or 612 or 613; PSY 587 or 687; PSY 589 or 680 or 681; and PSY 624 or 630). Students must register for graduate credit for these courses.

**Note 2:** Apply to MS degree only.

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**Doctor of Philosophy (Ph.D.) in Applied Experimental Psychology**

**Minimum Totals for Graduation: 54 hours**

The objective of the Ph.D. program in Applied Experimental Psychology is to develop individuals with strong applied experimental research skills for positions in business, industry, allied health, government agencies and in academia. The program is designed to provide advanced training in psychological processes (e.g. biological, cognitive, behavioral, social, personality) and quantitative-methodological procedures (e.g. statistics, experimental design, computer applications) and their utilization in an applied setting. The program will provide students with specialized applied training, including a pre-doctoral internship. The program uses a mentor system, matching students with faculty members who have interest in closely related areas. The current areas of training include: human factors (ergonomics, psychophysiology, attention and perceptual processes); behavioral medicine (with emphasis on developmental disabilities and infant disorders); applied cognitive science (with special emphasis on memory, cognitive modeling, decision making, forensic psychology); applied social psychology (social cognition, personality judgments, individual differences, and attitudes); applied developmental psychology (with emphasis on adjustment in adolescent and aged individuals); and applied behavioral neuroscience (with specific emphasis on testing potential pharmacotherapies for neurodegenerative diseases, such as Huntington’s and Parkinson’s diseases); and behavior analysis (with special emphasis on applied behavior analysis, behavioral pharmacology, behavioral pediatrics, organizational behavior management and the experimental analysis of behavior).

**Admission Requirements, Retention & Termination Standards**

<table>
<thead>
<tr>
<th>Admission Requirement Snapshot</th>
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</thead>
<tbody>
<tr>
<td><strong>Entrance Exam:</strong> GRE</td>
</tr>
<tr>
<td><strong>Application Deadline:</strong> January 15 (Fall)</td>
</tr>
<tr>
<td><strong>See Admission Requirement Details Below</strong></td>
</tr>
</tbody>
</table>

Applicants to the Program are expected to have a baccalaureate degree and at least 15 hours of psychology. The foundation of the program is the M.S. Program in Experimental Psychology. The first two years of the program are identical to those of the M.S. Program in Experimental Psychology. Students accepted into the program must complete all of the requirements of the M.S. Program in Experimental Psychology or its equivalent. The emphasis in third and fourth years is on advanced specialized training, including generating high quality applied research and gaining practical experience through internships.

**Program Requirements**

Admission to doctoral candidacy is based on satisfactory grades, completion of thesis requirements, and passing a comprehensive examination over PSY 800 project at the end of the third year. Before applying for pre-doctoral internship training, students must have a doctoral dissertation proposal accepted by their dissertation committee. The doctoral degree is awarded upon successful completion of a pre-doctoral internship, as well as the successful defense of a doctoral dissertation.

**Degree Requirements**

**Required Courses (30 hours)**

- PSY 789 - Seminar in Applied Experimental Psychology 1-9(Spec)
- PSY 800 - Research in Applied Experimental Psychology 1-12(Spec)
- PSY 898 - Doctoral Dissertation: Design 1-12(Spec)
- PSY 899 - Doctoral Dissertation: Implementation 1-12(Spec)

**Note:** A minimum of 15 credit hours from the combination of PSY 898 and PSY 899 is required.

(Continued)
Curriculum

Students are accepted into the program on a full-time basis. Before arriving on campus each student is assigned a clinical faculty mentor. This faculty mentor aids the student in his or her passage through the program. Students entering with a BA/BS degree are required to complete approximately 104 graduate credit hours. Although some courses may be waived based on prior graduate work, no more than 30 credit hours can be transferred. The current curricular requirements are listed below by year of completion.

Clinical Psychology

Master of Arts (M.A.) in Clinical Psychology

A Master of Arts degree in Clinical Psychology can only be awarded to students who have been accepted and matriculated in the Ph.D. program in Clinical Psychology. Students must complete the first two years of the Clinical Psychology program and defend a master’s thesis prior to petitioning for the M.A. degree.

Doctor of Philosophy (Ph.D.) in Clinical Psychology

Minimum Totals for Graduation: 104 hours

Model

The Ph.D. program in clinical psychology follows a scientist-practitioner model in training graduates to function as ethical clinical psychologists who have breadth and depth in assessment and intervention, as well as the ability to conduct clinical research. Graduates function successfully in modern professional contexts and demonstrate an investment in lifelong learning. The clinical faculty represent various clinical and research interests.

The program endorses the criteria for training set forth by the Committee on Accreditation of the American Psychological Association (APA)* and is listed as an accredited program. The curriculum reflects recent developments in scientific psychology, while imparting to students the skills needed to respond to contemporary clinical concerns. Our training model endorses practice based on sound theoretical and empirical foundation in the science of psychology. The doctoral program includes four years of intensive didactic preparation and applied experience plus a yearlong, full-time internship.

*Committee on Accreditation
American Psychological Association
750 First Street, NE
Washington, DC 20002-4242
202-336-5979
202-336-6123 TDD/TTY

Degree Requirements

Year 1 (24 hours)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 510</td>
<td>Principles of Psychological Measurement 3(3-0)</td>
</tr>
<tr>
<td>PSY 609</td>
<td>History and Systems of Psychology 3(3-0)</td>
</tr>
<tr>
<td>PSY 642</td>
<td>Clinical Research Methods 3(3-0)</td>
</tr>
<tr>
<td>PSY 653</td>
<td>Intervention I: Adult 3(3-0)</td>
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<tr>
<td>PSY 657</td>
<td>Assessment I: Adult 3(3-1)</td>
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<tr>
<td>PSY 658</td>
<td>Assessment II: Child and Adolescent 3(3-1)</td>
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<tr>
<td>PSY 660</td>
<td>Intervention II: Child and Adolescent 3(3-0)</td>
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<td>PSY 751</td>
<td>Psychopathology 3(3-0)</td>
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Year 2 (30 hours)

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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>PSY 612</td>
<td>Applied Multiple Regression and Correlation 3(3-0)</td>
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<tr>
<td>PSY 613</td>
<td>Multivariate and Correlational Methods 3(3-0)</td>
</tr>
<tr>
<td>PSY 624</td>
<td>Advanced Developmental Psychology 3(3-0)</td>
</tr>
<tr>
<td>PSY 641</td>
<td>Objective Personality Assessment 3(2-2)</td>
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<td>PSY 765</td>
<td>Seminar: Ethics and Professional Issues 3(3-0)</td>
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<tr>
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<td>Seminar: Cognitive-Behavior Therapy 3(3-0)</td>
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<td>PSY 790</td>
<td>Practicum I A: Professional Services 3(Spec)</td>
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<td>Practicum I B: Professional Services 3(Spec)</td>
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<td>PSY 798</td>
<td>Thesis 1-12(Spec)</td>
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Year 3 (24 hours)

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<tr>
<td>PSY 589</td>
<td>Cognitive Psychology 3(3-0)</td>
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<tr>
<td>PSY 630</td>
<td>Advanced Social Psychology 3(3-0)</td>
</tr>
<tr>
<td>PSY 661</td>
<td>Neuropsychological Assessment 3(3-0)</td>
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<tr>
<td>PSY 687</td>
<td>Physiological Foundations 3(3-0)</td>
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<tr>
<td>PSY 850</td>
<td>Ethnic and Minority Issues in Therapy 3(3-0)</td>
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<tr>
<td>PSY 890</td>
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<td>PSY 891</td>
<td>Practicum II B: Professional Services 3(Spec)</td>
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Year 4 (24 hours)

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<td>PSY 892</td>
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<td>PSY 893</td>
<td>Practicum III B: Professional Services 3(Spec)</td>
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<td>PSY 898</td>
<td>Doctoral Dissertation: Design 1-12(Spec)</td>
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<td>PSY 899</td>
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Year 5 (2 hours)

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<td>PSY 990</td>
<td>Internship A: Professional Services 1-6(Spec)</td>
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<tr>
<td>PSY 991</td>
<td>Internship B: Professional Services 1-6(Spec)</td>
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</tbody>
</table>

Total: 104 Semester Hours

Admission Requirements, Retention & Termination Standards

Admission

Admission requirements and a detailed description of the Clinical Ph.D. program can be obtained from the Department of Psychology. In addition to grades and GRE scores, the admissions committee is attentive to letters of recommendation, personal statements, and relevant professional experiences. The admissions committee selects students who have general academic preparation in psychology and psychology-related research methodology.

Program Requirements

Admission to doctoral candidacy is based on satisfactory grades, completion of thesis requirements, and passing a Clinical Qualifying Examination at the end of the third year. Before applying for pre-doctoral internship training, students must have a doctoral dissertation proposal accepted by their dissertation committee. The doctoral degree is awarded upon successful completion of a pre-doctoral internship, as well as the successful defense of a doctoral dissertation.
Industrial and Organizational (I/O) Psychology

The Department of Psychology offers a terminal Master's degree (M.A.) and a Doctor of Philosophy degree (Ph.D.) in Industrial and Organizational (I/O) Psychology. Both degrees are oriented toward training students for careers in research, university, or business settings. Graduates of the programs are typically involved in research, and in planning, design, delivery, or evaluation of psychological programs in organizations. Examples of such programs include employee testing and selection, performance appraisal, training, stress management, job and organizational design, and organizational change and development.

Master of Arts (M.A.) in Industrial/Organizational Psychology

Minimum Totals for Graduation: 39 hours

This program is designed for full-time students. It is helpful if students have taken introductory courses in general psychology, I/O psychology, social psychology, psychological testing or measurement, research methodology, and statistics.

Admission Requirements, Retention & Termination Standards

Admission Requirement Snapshot

Entrance Exam: GRE
Application Deadline: January 1 (Fall)
See Admission Requirement Details Below

When applying for the terminal M.A. degree in Industrial/Organizational Psychology, applicants must send three letters of reference, official GRE scores directly to the Psychology Department, and send the graduate college application materials to the Office of Research and Graduate Studies. The M.A. degree in Industrial/Organizational Psychology is based on the satisfactory completion of a minimum of 39 semester hours of graduate coursework, including a master's thesis. The M.A. is oriented toward training students for careers in business, government, consulting, or going on to Ph.D. programs.

Degree Requirements

Required Application Course (3 hours)
Select one of the following:
PSY 790 - Practicum I A: Professional Services 3(Spec)
PSY 791 - Practicum I B: Professional Services 3(Spec)

Required Courses (18 hours)
PSY 535 - Organizational Psychology 3(3-0)
PSY 536 - Personnel Psychology 3(3-0)
PSY 537 - Organizational Behavior Management 3(3-0)
PSY 636 - Organizational Applications of Personnel Psychology 3(3-0)
PSY 736 - Strategies for Interventions in Social Systems 3(Spec)
PSY 798 - Thesis 1-12(Spec)

Note: Student must choose between PSY 537 and PSY 736.

Required Quantitative Courses (9 hours)
Select three from the following:
PSY 510 - Principles of Psychological Measurement 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)

Electives (9 hours)
Psychology electives to be selected in consultation with the advisor.

Total: 39 semester hours

Doctor of Philosophy (Ph.D.) in Industrial/Organizational Psychology

Minimum Totals for Graduation: 96 hours

This program is designed for full-time students. It is helpful if students have taken introductory courses in general psychology, I/O psychology, social psychology, psychological testing or measurement, research methodology, and statistics.

The Ph.D. curriculum in I/O Psychology involves approximately four years of intensive academic preparation. The curriculum has been designed to reflect classic and current developments in applied psychology and to provide skills needed in the resolution of organizational problems. Students take courses in foundations areas of psychology. Training in I/O Psychology emphasizes theory, research, and practice in personnel psychology and organizational psychology.

Admission Requirements, Retention & Termination Standards

Admission Requirement Snapshot

Entrance Exam: GRE
Application Deadline: January 1 (Fall)
See Admission Requirement Details Below

Admission

When applying for the Ph.D. in I/O Psychology, applicants must submit three letters of reference and official GRE scores.

Program Requirements

Progress through the program is based upon satisfactory grades (a B average overall and a B or better in each class) plus the passage of a comprehensive exam, and successful completion of coursework, a master's thesis, and a doctoral dissertation. Students must take a minimum of 12 hours of dissertation credits, and may take up to 24 hours.

Students entering the Ph.D. program are expected to complete the program within seven (7) years. The time limit for students entering with a graduate degree or graduate work will be prorated. Extension of the time limit to complete degree requirements will be granted rarely and only if steady progress toward the degree is evident.

An internship is optional. Before accepting an internship, I/O students must pass their comprehensive exams and have a doctoral dissertation proposal accepted by their dissertation committees.

Students entering with a bachelor's degree will be required to complete approximately 96 credit hours; those entering with a master's degree will be required to complete approximately 70 graduate credit hours.

Some courses are offered in accordance with a planned sequence. Students enrolled in the Ph.D. program in I/O Psychology will be eligible for the Master of Arts degree after successful completion of appropriate coursework and a master's thesis.

Degree Requirements

Required Courses (16 hours)
Foundations of Psychology Courses
Select two of the following with these exceptions: If you select PSY 587, do not select PSY 687. If you select one of PSY 589, PSY 680 or PSY 681 do not select the other two.
PSY 531 - Group Dynamics 3(3-0)
PSY 544 - Theories of Personality 3(3-0)
PSY 583 - Motivation and Emotion 3(3-0)
PSY 587 - Physiological Psychology 3(3-0)
PSY 589 - Cognitive Psychology 3(3-0)
PSY 609 - History and Systems of Psychology 3(3-0)
PSY 614 - Seminar in Research Methods and Statistics for Psychology 3(3-0)

Application Deadline: January 1 (Fall)

See Admission Requirement Details Below

Admission

When applying for the Ph.D. in I/O Psychology, applicants must submit three letters of reference and official GRE scores.

Program Requirements

Progress through the program is based upon satisfactory grades (a B average overall and a B or better in each class) plus the passage of a comprehensive exam, and successful completion of coursework, a master's thesis, and a doctoral dissertation. Students must take a minimum of 12 hours of dissertation credits, and may take up to 24 hours.

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Degree Requirements

Required Courses (16 hours)
Foundations of Psychology Courses
Select two of the following with these exceptions: If you select PSY 587, do not select PSY 687. If you select one of PSY 589, PSY 680 or PSY 681 do not select the other two.
PSY 531 - Group Dynamics 3(3-0)
PSY 544 - Theories of Personality 3(3-0)
PSY 583 - Motivation and Emotion 3(3-0)
PSY 587 - Physiological Psychology 3(3-0)
PSY 589 - Cognitive Psychology 3(3-0)
PSY 609 - History and Systems of Psychology 3(3-0)
PSY 614 - Seminar in Research Methods and Statistics for Psychology 3(3-0)

Application Deadline: January 1 (Fall)

See Admission Requirement Details Below

Admission

When applying for the Ph.D. in I/O Psychology, applicants must submit three letters of reference and official GRE scores.

Program Requirements

Progress through the program is based upon satisfactory grades (a B average overall and a B or better in each class) plus the passage of a comprehensive exam, and successful completion of coursework, a master's thesis, and a doctoral dissertation. Students must take a minimum of 12 hours of dissertation credits, and may take up to 24 hours.

Students entering the Ph.D. program are expected to complete the program within seven (7) years. The time limit for students entering with a graduate degree or graduate work will be prorated. Extension of the time limit to complete degree requirements will be granted rarely and only if steady progress toward the degree is evident.

An internship is optional. Before accepting an internship, I/O students must pass their comprehensive exams and have a doctoral dissertation proposal accepted by their dissertation committees.

Students entering with a bachelor's degree will be required to complete approximately 96 credit hours; those entering with a master's degree will be required to complete approximately 70 graduate credit hours.

Some courses are offered in accordance with a planned sequence. Students enrolled in the Ph.D. program in I/O Psychology will be eligible for the Master of Arts degree after successful completion of appropriate coursework and a master's thesis.
**Required Courses II (24 hours)**

**Industrial/Organizational Psychology Content Courses**

- PSY 535 - Organizational Psychology 3(3-0)
- PSY 536 - Personnel Psychology 3(3-0)
- PSY 538 - Occupational Health Psychology 3(3-0)
- PSY 636 - Organizational Applications of Personnel Psychology 3(3-0)
- PSY 736 - Strategies for Interventions in Social Systems 3(Spec)
- PSY 737 - Seminar in I/O Psychology 3-12(Spec)

**Required Courses III (12 hours)**

**Research Courses**

- PSY 510 - Principles of Psychological Measurement 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)

**Required Courses IV (3 hours)**

**Experience-based Courses**

Select one of the following:

- PSY 790 - Practicum I A: Professional Services 3(Spec)
- PSY 791 - Practicum I B: Professional Services 3(Spec)

**Master's Thesis (6 hours)**

- PSY 798 - Thesis 1-12(Spec)

**Doctoral Dissertation (12 hours)**

12 hours are required, 6 in PSY 898 and 6 in PSY 899. Students may take an additional 12 dissertation credits as electives.

- PSY 898 - Doctoral Dissertation: Design 1-12(Spec)
- PSY 899 - Doctoral Dissertation: Implementation 1-12(Spec)

**Electives (33 hours)**

A. 33 hours of electives, of which 9 hours may be from outside Psychology. OR

B. **Occupational Health Psychology (OHP) Concentration Requirements within the I/O Ph.D. Program**

Students in the Industrial/Organizational Psychology Ph.D. Program can earn a concentration in OHP by using 9 hours of their I/O Psychology Program electives in OHP courses and completing a thesis or doctoral dissertation on an OHP topic. The 9 hours of OHP electives must come from the following list unless substitutions are approved by the student’s advisor or the I/O Psychology Program Director. The thesis or dissertation topic also must be approved as an OHP topic by the student’s advisor or the I/O Psychology Program Director.

** Electives (24 hours)**

Select 24 hours.

**Occupational Health Psychology Concentration (9 hours)**

- HSC 505 - Work Injury Prevention 3(3-0)
- HSC 537 - Stress Reduction Workshop 1(Spec)
- HSC 544 - Biostatistics 3(2-1)
- HSC 604 - Epidemiology 3(3-0)
- PSY 559 - Rehabilitation Psychology 3(3-0)
- PSY 579 - Behavioral Medicine 3(3-0)
- PSY 696 - Directed Research 1-12(Spec)
- PSY 697 - Independent Study 1-8(Spec)
- PSY 737 - Seminar in I/O Psychology 3-12(Spec)
- PSY 751 - Psychopathology 3(3-0)
- SOC 514 - Sociology of Health and Illness 3(3-0)

**Total: 96 semester hours**

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**School Psychology**

**Training Model: Scientist-Practitioner Model**

The training model is based on the scientist-practitioner tradition emphasizing the application of behavioral science in educational systems and the larger community. Training emphasizes practice guided by scientific knowledge. Students are taught to use scientific principles to inform their practice (including consultation, intervention, and diagnostic services) and to evaluate their practice in order to improve services as well as contribute to the field of school psychology. The program is committed to fostering in its students sensitivity to, appreciation for, and understanding of ethnic diversity. Similarly, the program strives to promote understanding of, and responsiveness to, the special needs of individuals with disabilities.

**Specialist in Psychological Services (S.Psy.S.)**

**Minimum Totals for Graduation: 70 hours**

This is a three-year, full-time, 70-hour graduate program, designed specifically to meet NASP/NCATE accreditation standards, leading to the Master of Arts degree in Psychology and the Specialist in Psychological Services. Students complete coursework that prepares them to be knowledgeable in the following core content areas: Psychological and Educational Foundations, Research Methods, Psychological and Educational Assessment, Intervention Strategies, and Professional School Psychology. A full-time internship is completed during the third year of the program. The program is designed to be completed in three years. Students are expected to take no more than five years to finish. Although this is a three-year graduate degree, applications will be accepted from students who already have taken graduate work, including the master’s degree, at Central Michigan University or at other approved institutions. Credit will be given for such work in accordance with university regulations, provided it is consistent with the School Psychology curriculum.

This program meets the Michigan requirements for certification as a School Psychologist as defined by the State Board of Education. In addition, this program will permit certification as a School Psychologist in the majority of states.

**Admission Requirements, Retention & Termination Standards**

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<tr>
<th>Admission Requirement Snapshot</th>
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<tr>
<td>GPA: 3.0</td>
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<td>Entrance Exam: GRE</td>
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**Application Deadline: November 15 (Fall)**

See Admission Requirement Details Below.

**Admission**

Admission is competitive with approximately 8 to 10 students accepted each year.

An acceptable master’s degree or 15 semester hours of undergraduate psychology or the equivalent as determined by the department, a 3.0 overall grade point average, and scores from the Graduate Record Examination taken within the last five years are required for admission. Students who are deficient in certain subject areas will be expected to make up these deficiencies in addition to the normally prescribed graduate coursework for the degree.

**Program Requirements**

Progress through the program is based on satisfactory grades (a grade point average of “B” or better overall) and satisfactory evaluations of pre-professional functioning (e.g., appropriate interpersonal skills, ethical and professional conduct). Serious and persistent difficulties in preprofessional functioning may result in dismissal from the program (see Student Handbook, School Psychology Program). For admission to PSY 790, a student must have earned a “B” or better grade in all assessment, intervention, and consultation courses. In addition, a student must earn a “B” or better grade in PSY 791 and have an approved thesis proposal prior to admission to PSY 795.
At the master's degree level, a thesis and oral exam over the thesis are required. At the specialist degree level, the student must demonstrate professional competencies in working with students, parents, and school personnel. This requirement will be met by the student's satisfactory completion of a supervised internship (PSY 795, Internship A; PSY 796, Internship B).

**Degree Requirements**

**Required Courses for Master's Degree (34 hours)**

34 hours chosen from Required Courses I-VI below:

**Required Courses I (19 hours)**
- PSY 605 - Assessment of Affective and Behavioral Disorders of Children and Youth 3(3-0)
- PSY 655 - Introduction to Intelligence Testing 2(2-2)
- PSY 656 - Advanced Intellectual Assessment 2(2-2)
- PSY 667 - Assessment and Development of Academic Skills I 3(3-1)
- PSY 767 - Assessment and Intervention for Developmental Disabilities 3(3-1)
- PSY 798 - Thesis 1-12(Spec)

**Required Courses II (3 hours)**
- PSY 511 - Statistics in Psychology 3(3-1)

**Required Courses III (3 hours)**
- Social Basis of Behavior
  - SPE 550 - Teaching Culturally Diverse Students 3(3-0)

**Required Courses IV (3 hours)**
- Human Development
  - PSY 682/EDU 682 - Psychology of Child Development 3(3-0)

**Required Courses V (3 hours)**
- Cognitive Basis of Behavior
  - PSY 680 - Learning 3(3-0)

**Required Courses VI (3 hours)**
- Biological Basis of Behavior
  - PSY 587 - Physiological Psychology 3(3-0)

**Note:** Course substitutions can be made in Required Courses III through VI with the approval of the student's advisor and program director.

**Additional Required Courses for the Specialist Degree (36 hours)**

36 additional hours are required for the Specialist Degree selected from Additional Required Courses I and II as follows:

**Additional Required Courses I (3 hours)**
- Select one of the following:
  - PSY 586 - Applied Behavioral Analysis in Education 3(3-0)
  - PSY 780 - Behavior Therapy 3(2-2)

**Additional Required Courses II (27 hours)**
- PSY 562 - Therapeutic Intervention: Foundations 3(3-0)
- PSY 662 - Advanced Therapeutic Interventions 3(3-1)
- PSY 677 - Assessment and Development of Academic Skills II 3(3-0)
- PSY 760 - Seminar: School Services 3(3-0)
- PSY 766 - Seminar: Consultation Skills 3(Spec)
- PSY 790 - Practicum I A: Professional Services 3(Spec)
- PSY 791 - Practicum I B: Professional Services 3(Spec)
- PSY 795 - Internship in School Psychology A 3(Spec)
- PSY 796 - Internship in School Psychology B 3(Spec)

**Electives (6 hours)**
- Hours of coursework are chosen with the approval of the student's advisor.

**Total: 70 semester hours**

**Doctor of Philosophy (Ph.D.) in School Psychology**

**Minimum Totals for Graduation: 106 hours**

CMU's School Psychology Doctoral program is fully accredited by the American Psychological Association (APA*) and is approved by the the National Association of School Psychologists (NASP).

The Doctor of Philosophy curriculum in School Psychology is designed to extend the training of the specialist level school psychologist so that he or she is prepared to serve educational systems and the larger community. The program prepares school psychologists who are flexible enough to assume a variety of roles in the delivery of mental health services; who can assume a leadership role in the development of comprehensive and effective educational and psychological services to children, families, and schools; and who are able to supervise, coordinate, and direct the activities of others in the delivery of school psychological services.

The program of study typically includes four years of intensive academic preparation and field experience plus a one-year, full-time internship. Students must successfully complete three (3) years of graduate study. At least 600 hours of supervised experience shall be in a school setting. The curriculum is designed to reflect recent developments in school psychology.

Students are accepted into the program on a full-time basis, and normal progress through the program requires a course load of about 12 credit hours per semester. Students are expected to take at least 6 credit hours per semester. For at least one year of the program, students must be in full-time residence at Central Michigan University.

*Questions related to the program's accredited status should be directed to the Commission on Accreditation: Office of Program Consultation and Accreditation, American Psychological Association, 750 1st Street NE, Washington, DC 20002. Phone: 202-336-5979; e-mail: appaaccred@apa.org; Web: www.apa.org/ed/accreditation.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

**ADMISSION REQUIREMENT SNAPSHOT**

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**Application Deadline:**
- November 15 (Fall)

See Admission Requirement Details Below

**Admission**

Admission is competitive with approximately 8 to 10 students accepted each year (Specialist and Doctoral). Minimum admission requirements include an undergraduate major in psychology or at least 15 semester hours of psychology and a 3.0 overall grade point average. A background in scientific psychology and basic research methodology including statistics and experimental psychology is strongly weighted to assure that students will be conversant with research. Students who do not meet the required 15 semester hours of basic psychology courses, but appear qualified for doctoral study, are required to remedy deficiencies as part of their initial coursework. The doctoral admissions committee will identify what coursework is necessary and inform the student about remediation.

In addition to grades and GRE scores (taken within five years of application), the doctoral admissions committee is very attentive to letters of recommendation, personal statements, and relevant professional experiences. Work history, professional goals, capacity for relating to and working with other people, emotional maturity and stability, and motivation also are considered. GRE scores are viewed as one predictor of the likelihood of success in graduate study. Consequently, for applicants who already hold a graduate degree in school psychology or a related field, greater weight is given to prior graduate school performance rather than GRE scores.

**Program Requirements**

Progress through the program is based upon satisfactory grades (a B average overall; a B or better in all assessment, intervention, consultation, practica, and internship courses; and a B- or better in (Continued)
all other classes) and satisfactory evaluations of pre-professional functioning (e.g., appropriate interpersonal skills, ethical and professional conduct). Serious and persistent difficulties in pre-professional functioning may result in dismissal from the program (See Student Handbook, School Psychology Program).

Successful completion of the thesis and comprehensive exam and approval of the dissertation proposal are required before taking the internship. The Ph.D. degree will be awarded upon successful completion of coursework, a thesis, a doctoral dissertation, and an internship.

Students entering with a BA/BS degree will be required to complete 106 credit hours. Those entering with an MA/MS degree in School Psychology will be required to complete approximately 70 graduate hours. Students are required to complete at least two (2) of academic training at Central Michigan University. Courses are offered in accordance with a planned sequence designed to meet individual needs in terms of professional goals, academic background, and attained skills of each candidate.

Degree Requirements

Required Courses I (9 hours)
PSY 609 - History and Systems of Psychology 3(3-0)
PSY 630 - Advanced Social Psychology 3(3-0)
PSY 687 - Physiological Foundations 3(3-0)

Required Courses II (3 hours)
Human Development
PSY 624 - Advanced Developmental Psychology 3(3-0)

Required Courses III (3 hours)
Cognitive and Affective Aspects of Behavior
Select one of the following:
PSY 589 - Cognitive Psychology 3(3-0)
PSY 680 - Learning 3(3-0)

Required Courses IV (3 hours)
Multicultural Issues
Select one of the following:
HDF 603/SOC 611 - Human Diversity Within and Between Families 3(3-0)
PSY 533 - Psychology of Racism 3(3-0)
PSY 850 - Ethnic and Minority Issues in Therapy 3(3-0)

Required Courses V (6 hours)
Educational Foundations
PSY 677 - Assessment and Development of Academic Skills II 3(3-0)
PSY 760 - Seminar: School Services 3(3-0)

Required Courses VI (28 hours)
Assessment and Intervention
PSY 562 - Therapeutic Intervention: Foundations 3(3-0)
PSY 605 - Assessment of Affective and Behavioral Disorders of Children and Youth 3(3-0)
PSY 655 - Introduction to Intelligence Testing 2(2-2)
PSY 656 - Advanced Intellectual Assessment 2(2-2)
PSY 662 - Advanced Therapeutic Interventions 3(3-1)
PSY 667 - Assessment and Development of Academic Skills I 3(3-1)
PSY 751 - Psychopathology 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)

Required Courses VII (9 hours)
Methods Statistics and Program Evaluation Courses
PSY 611 - Research Design 3(3-0)
PSY 612 - Applied Multiple Regression and Correlation 3(3-0)
PSY 818 - Program Evaluation 3(Spec)

Required Courses VIII (3 hours)
Ethics
PSY 765 - Seminar: Ethics and Professional Issues 3(3-0)

Thesis (6 hours)
PSY 798 - Thesis 1-12(Spec)

Required Experience-Based Courses (18 hours)
PSY 790 - Practicum I A: Professional Services 3(Spec)
PSY 791 - Practicum I B: Professional Services 3(Spec)
PSY 890 - Practicum II A: Professional Services 3(Spec)
PSY 891 - Practicum II B: Professional Services 3(Spec)
PSY 990 - Internship A: Professional Services 1-6(Spec)
PSY 991 - Internship B: Professional Services 1-6(Spec)

Doctoral Dissertation (12 hours)
PSY 898 - Doctoral Dissertation: Design 1-12(Spec)
PSY 899 - Doctoral Dissertation: Implementation 1-12(Spec)

Electives (6 hours)
Chosen in consultation with advisor

Total: 106 semester hours

M.S. and Ph.D. in Neuroscience

These degrees are interdisciplinary programs. Please see the index for the page number.

Course Descriptions: PSY

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. Prerequisite: PSY 310, PSY 211.

PSY 511 Statistics in Psychology 3(3-1)
An extension of topics introduced in PSY 211, with emphasis upon hypothesis testing and statistical inference. Prerequisite: PSY 211.

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, 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)
The study of health and stress in organizations as a complex process, with analyses of resources, stressors, coping, stress responses, and consequences. Prerequisites: PSY 336 and 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 will review the behavioral and educational characteristics of students with autism spectrum disorders. Known causes of this disorder will also be examined. Identification, diagnosis and intervention will be emphasized. Prerequisites: senior 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 include anatomy 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. Prerequisites: 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)
Function of the nervous system in behavior. Emphasis is on how various CNS structures function to mediate behavior. Prerequisite: PSY 387 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.

PSY 600 Special Issues 1-12(Spec)
Subjects of contemporary psychology not covered by regular curriculum. Prerequisite: See Course Search and Registration.

PSY 605 Assessment of Affective and Behavioral Disorders of Children and Youth 3(3-0)
Assessment measures and procedures for emotional and behavior disorders of children and adolescents will be addressed with an emphasis on linking assessment to intervention. Prerequisite: matriculation in the School Psychology program or the Clinical Psychology program.

PSY 609 History and Systems of Psychology 3(3-0)
Modern psychology is analyzed by tracing its historical roots and early systems. Emphasis is on the influence of historical systems on current areas of specialization.

PSY 611 Research Design 3(3-0)
Common types of analysis of variance, multiple comparisons tests, the analysis of covariance. Prerequisite: PSY 511.

PSY 612 Applied Multiple Regression and Correlation 3(3-0)
A study of the general linear model as applied to multiple regression and the analysis of variance. Prerequisites: PSY 211 and permission of instructor.

PSY 613 Multivariate and Correlational Methods 3(3-0)
A survey of multivariate statistical procedures, including multiple regression and correlation, canonical and discriminant analysis, multivariate analysis of variance, and factor analysis. Prerequisites: PSY 612.

PSY 614 Seminar in Research Methods and Statistics for Psychology 3-12(3-0)
Exploration of specialized research methods and statistics for Psychology. Topics may include quasi-experimental designs, meta-analysis, modeling techniques, qualitative research, or other advanced research methods topics. This course may be taken as a three credit course and may be repeated up to twelve hours, as long as the topic is different. Prerequisites: PSY 612.

PSY 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

PSY 624 Advanced Developmental Psychology 3(3-0)
Basic theory and principals of life-span developmental psychology. Prerequisite: matriculation in psychology graduate program.

PSY 630 Advanced Social Psychology 3(3-0)
Intensive examination of the major theories and experiments of social psychology. Prerequisite: matriculation in psychology graduate program.

PSY 636 Organizational Applications of Personnel Psychology 3(3-0)
This course examines multiple approaches, assumptions, and technologies in personnel psychology, the implementation and utilization of personnel technologies, and selected current topics. Prerequisites: graduate standing and PSY 536.

PSY 641 Objective Personality Assessment 3(2-2)
Survey of concepts, procedures, and issues in personality assessment. Prerequisites: PSY 544, matriculation in the School or Clinical psychology graduate programs.

PSY 642 Clinical Research Methods 3(3-0)
Provides a basis for designing and executing clinical research and data analysis. Prerequisites: Matriculation into the Ph.D. program in Clinical Psychology at CMU or approval from the instructor.

PSY 653 Intervention I: Adult 3(3-0)
Survey of different therapeutic approaches and techniques. Prerequisite: admission to the Doctoral Program in Clinical Psychology.

PSY 655 Introduction to Intelligence Testing 2(2-2)
Administration and interpretation of individual intelligence scales. Lab fee prorated among class members after registration. Prerequisite: permission of instructor.

PSY 656 Advanced Intellectual Assessment 2(2-2)
Report writing, interpretation of intelligence tests, and integration of testing with other assessment devices used in diagnosis of emotional and learning problems. Prerequisites: PSY 655 and permission of instructor.

PSY 657 Assessment I: Adult 3(3-1)
Administration and interpretation of intelligence scales, report writing, and integration of intellectual testing with other assessment devices. Prerequisite: matriculation in Clinical Psychology program.

PSY 658 Assessment II: Child and Adolescent 3(3-1)
Intelligent and personality assessment of children and adolescents. Prerequisite: admission to the doctoral program in Clinical Psychology.

PSY 660 Intervention II: Child and Adolescent 3(3-0)
Introduction to therapeutic interventions for children and adolescents. Prerequisite: admission to the doctoral program in Clinical Psychology.

PSY 661 Neuropsychological Assessment 3(3-0)
Introduction to neuropsychological assessment of behavior with emphasis on instrument, research, and interpretation. Prerequisite: PSY 587 or PSY 687.

PSY 662 Advanced Therapeutic Interventions 3(3-1)
The practice and application of therapeutic intervention with children, birth through high school. Takes a developmental perspective on children's problems. Prerequisites: PSY 562 and concurrent enrollment in PSY 791.

PSY 667 Assessment and Development of Academic Skills I 3(3-1)
Administration and interpretation of special diagnostic testing of children with learning difficulties. Lab fee. Prerequisite: PSY 577.
PSY 677 Assessment and Development of Academic Skills II 3(3-0)
Principles underlying development and evaluation of academic interventions and critique of current programs and procedures designed to improve academic performance of K-12 children. Prerequisite: matriculation in Psychology graduate program.
PSY 680 Learning 3(3-0)
Theory and research in basic learning phenomena including classical, operant, and complex behavior. Prerequisite: permission of instructor.
PSY 681 Sensation and Perception 3(3-0)
Cognitive, neuroscience, psychophysical, and abnormal analysis of perceptual systems. Vision and audition are emphasized. Prerequisite: Permission of instructor.
PSY 682 Psychology of Child Development 3(3-0)
Identical to EDU 682. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.
PSY 686 Engineering Psychology 3(3-0)
An overview of the discipline of engineering psychology including the topics of human error and applications of perception and cognition in human-machine systems. Prerequisite: graduate standing in Psychology.
PSY 687 Physiological Foundations 3(3-0)
Extensive survey of knowledge of the physiological, anatomical, and hormonal events underlying human behavior, emphasizing brain function and neurochemical factors.
PSY 690 Research Seminar: Experimental Psychology 1-3(Spec)
Study of problems and issues in experimental psychology under faculty guidance via lecture and seminar format. CR/NC only.
PSY 696 Directed Research 1-12(Spec)
For students who desire to investigate some research problem in psychology. Prerequisite: must file written proposal approved by faculty sponsor in departmental office prior to registration.
PSY 697 Independent Study 1-8(Spec)
For students who accept responsibility for studying a psychological problem of their own. Prerequisite: must file written proposal approved by faculty sponsor in departmental office prior to registration.
PSY 700 Special Issues 1-12(Spec)
Special topics in contemporary psychology. May be repeated to a maximum of 12 hours, but no more than 3 hours may be taken per semester. Prerequisites: admission to doctoral candidacy in psychology; see Course Search and Registration.
PSY 724 Psychology of Aging 3(3-0)
This course examines theories of adult development and how those theories are related to important issues affecting older adults. Prerequisite: graduate standing.
PSY 727 Developmental Neuropsychology 3(3-0)
Introduction to neuropsychological assessment of children with emphasis on instruments, research and interpretation. For advanced graduate students. Prerequisites: PSY 661 or PSY 655 or PSY 667.
PSY 736 Strategies for Interventions in Social Systems 3(Spec)
Study of various social technologies of intervention, and the evaluation of a range of these methods. Prerequisite: matriculation in professional psychology doctoral program.
PSY 737 Seminar in I/O Psychology 3-12(Spec)
Exploration of specialized areas in the field of I/O Psychology. This course is taken as a three credit course and may be repeated for a maximum of twelve hours. Prerequisite: Admission to masters or doctoral programs in I/O Psychology.
PSY 751 Psychopathology 3(3-0)
A course in descriptive psychopathology with an emphasis on understanding the manifestations of disordered functioning within a variety of cultural and contextual constraints. Prerequisite: admission into a graduate program in psychology.
PSY 760 Seminar A: School Services 3(3-0)
Philosophical rationale for development of school psychology as major discipline. Role of school psychologist, and legal and ethical issues that affect the role are discussed. Prerequisite: permission of instructor.
PSY 761 Advanced Seminar in Ethical-Legal Issues for School Psychologists 1(1-0)
New and emerging ethical-legal issues in school psychology. This course may be offered in an online or hybrid format. Recommended: Prior coursework in applied professional ethics.
PSY 765 Seminar: Ethics and Professional Issues 3(3-0)
Problems and issues in the practice of professional psychology. Prerequisite: matriculation in school psychology subdoctoral program or professional psychology doctoral programs.
PSY 766 Seminar: Consultation Skills 3(Spec)
Objectives of and strategies in consultation are studied with practice and evaluation of methods in actual work settings. Prerequisite: Advanced graduate standing in psychology.
PSY 767 Assessment and Intervention for Developmental Disabilities 3(3-1)
Procedures and background issues for psychodynamic assessment and intervention for infants, children, and adolescents who are emotionally, visually, hearing-, motorically-, or mentally-impaired or autistic. Prerequisite: PSY 667.
PSY 780 Behavior Therapy 3(2-2)
Assumptions and principles of behavioral analysis and the strategies used in a variety of behavioral disorders. Prerequisite: Admission to a graduate program in psychology.
PSY 781 Seminar: Perception 4(Spec)
Detailed treatment of selected research areas in perception. Emphasis is on perceptual data and measures and their application to real world situations. Prerequisites: PSY 681 or PSY 686.
PSY 785 Seminar: Cognitive-Behavior Therapy 3(3-0)
A graduate seminar focusing on the development and implementation of cognitive-behavioral interventions for the remediation of a variety of psychiatric disorders. Prerequisite: permission of instructor.
PSY 790 Seminar in Applied Experimental Psychology 1-9(Spec)
Exploration of specialized areas in the field of Applied Experimental Psychology through the review of the primary literature. May be repeated to a maximum of 9 hours, but no more than 3 hours may be taken per semester. Prerequisite: permission of instructor.
PSY 790 Practicum I: Professional Services 3(Spec)
Practice needed to function as a competent psychologist within a variety of professional settings. Prerequisites: Admission to Clinical Psychology or Industrial/Organizational Psychology or School Psychology.
PSY 791 Practicum II: Professional Services 3(Spec)
Continuation of 790. Prerequisites: A grade of B or better in PSY 790.
PSY 792 Supplemental Supervision 1-3(Spec)
Supplemental supervision arranged with clinical or school supervising faculty. For students with special interests. Prerequisites: matriculation in clinical or school psychology graduate programs, enrollment in one of the practica, and permission of the instructor.
PSY 795 Internship in School Psychology A 3(Spec)
The first semester of a 1200 hour full-time experience in a school setting supervised by an approved school psychologist and on-campus faculty. Prerequisites: PSY 790 and PSY 791; permission of instructor.
PSY 796 Internship in School Psychology B 3(Spec)
Continuation of 795. The second semester of a 1,200 hour full-time experience in a school system. Prerequisite: PSY 795.
PSY 798 Thesis 1-12(Spec)
CR/NC only.
PSY 800 Research in Applied Experimental Psychology 1-12(Spec)
Directed research course in which students work in close collaboration with instructor on a research topic in the area of applied experimental psychology. May be repeated to a maximum of 12 hours. Prerequisites: permission of instructor; students should have graduate standing, and have completed most, if not all, of the requirements for the M.S. degree in General/Experimental Psychology.
PSY 818 Program Evaluation 3(Spec)
Design and implementation of program evaluation research in professional settings with a focus on how to evaluate such research. Prerequisites: matriculation in graduate program, PSY 612.
PSY 850 Ethnic and Minority Issues in Therapy 3(3-0)
A graduate seminar addressing cultural issues in therapy with different ethnic and minority groups. Prerequisite: matriculated students in graduate programs.
PSY 890 Practicum IIA: Professional Services 3(Spec)
Development of advanced competencies and expansion of a repertoire of skills in the delivery of psychological services. CR/NC only. Prerequisites: matriculation in psychology doctoral program and permission of instructor.
PSY 891 Practicum IIB: Professional Services 3(Spec)
Continuation of PSY 890. CR/NC only. Prerequisites: matriculation in psychology doctoral program and permission of instructor.
PSY 892 Practicum III A: Professional Services 3(Spec)
Further development of advanced clinical competencies and a repertoire of psychodiagnostic, psychotherapy, interviewing, and consultation skills in the delivery of psychological services. CR/NC only. Prerequisites: matriculation in the professional psychology doctor program, PSY 790, PSY 791, PSY 890, PSY 891, and permission of instructor.
PSY 893 Practicum III B: Professional Services 3(Spec)
Continuation of PSY 892. CR/NC only. Prerequisites: PSY 892 and permission of instructor.
PSY 898 Doctoral Dissertation: Design 1-12(Spec)
Design of a doctoral dissertation. CR/NC only. Prerequisite: matriculation in psychology doctoral program.
PSY 899 Doctoral Dissertation: Implementation 1-12(Spec)
Completion of the doctoral dissertation designed in PSY 898: data collection, analysis, and write-up. CR/NC only. Prerequisite: PSY 898.
PSY 990 Internship A: Professional Services 1-6(Spec)
Development of competencies in psychological services, program development, evaluation, needs assessment and/or delivery system: PSY 990-991 constitutes a full-time, year-long experience. CR/NC only. Prerequisite: Matriculation in psychology doctoral program; completed M.A. thesis; passed comprehensive exams; dissertation proposal completed and accepted; and permission of instructor.
PSY 991 Internship B: Professional Services 1-6(Spec)
Continuation of 990 as a full-time, year-long experience. CR/NC only. Prerequisite: Matriculation in psychology doctoral program; completed M.A. thesis; passed comprehensive exams; dissertation proposal completed and accepted; and permission of instructor.
Department of Recreation, Parks, and Leisure Services Administration (RPL)

College of Education and Human Services

Robert Frost, Interim Chairperson,
214 Finch, (989) 774-3858

Lynn Dominguez, Ph.D., Outdoor Recreation
Robert Dvorak, Ph.D., Outdoor Recreation
Al Ellard, Re.D., Recreation Administration
Robert Frost, M.A., Therapeutic Recreation
Timothy Otteman, Ph.D., Programming & Event Management
Dean Pybus, Ph.D., Recreation Administration

Mary Lou Schilling, Ph.D., Therapeutic Recreation

The Department of Recreation, Parks, and Leisure Services Administration offers a Master of Arts degree in Recreation, Parks, and Leisure Services Administration, with options in Recreation and Parks Administration and Therapeutic Recreation. The Department also offers a concentration on the Master Science in Administration program, an interdisciplinary degree.

The graduate programs in Recreation, Parks, and Leisure Services Administration are strengthened by the diverse academic and professional background of the faculty. The faculty members provide information, suggest areas of study and research, and furnish expertise in the areas of park and recreation administration, including organization, legislation, personnel management, financing and marketing; and therapeutic recreation including administration, programming, federal regulations, and advocacy.

Graduates of the department have been well accepted in the professional fields as well as at doctoral level programs at other institutions. Over 750 graduates of these master’s programs are now located throughout the United States.

Graduate assistantships are available in the RPL Department. Opportunities may involve research, teaching assignments, assisting in the management of the undergraduate internship programs, Adventure Seminar supervision, or external assignments in area communities. Contact the Graduate Coordinator for further information. Refer to the department website (http://www.cmich.edu/academics/educ_humanservices/rec_parks_leisure/Pages/default.aspx).

The graduate program continues to evolve to meet the changing needs in the profession of recreation, parks, and leisure services.

Master of Arts (M.A.) in Recreation and Parks Administration or Therapeutic Recreation

Minimum Totals for Graduation: 33 hours

Admission Requirements, Retention & Termination Standards

Note: Effective Spring, 2012 through Summer, 2015, the department is not accepting students into the M.A. in Recreation and Parks Administration or Therapeutic Recreation. Questions regarding this matter may be directed to the chair of the Department of Recreation, Parks, and Leisure Services Administration at 989-774-3858.

Admission Requirement Snapshot

GPA: 3.0
Entrance Exam: GRE
Internat'l Application Deadline: July 1 (Fall), Oct. 1 (Fall)
See Admission Requirement Details Below

The student must meet the general requirements for admission to the Graduate Studies at CMU. In addition, applicants for admission to the RPL programs must:

1. a major in Recreation, Parks, and Leisure Services Administration on campus (or similarly titled program) with appropriate concentration, or
2. a degree in another area with attained competencies commensurate with a RPL degree.

B. Have a grade point average of 3.0 over the last 60 hours of undergraduate work.

C. Submit two references for academic potential and two references for human service abilities.

D. Submit a written candidate’s paper, discussing professional/career goals in relation to the graduate program in RPL at CMU and identifying and discussing prior experiences relevant to proposed program and professional/career goals.

E. Submit results of GRE (Graduate Record Examination).

Forms are available from the RPL Graduate Coordinator or on the department website (rpl.cmich.edu).

Conditional Admission

A. If the student has insufficient background in RPL, that applicant must complete 3-12 credits of undergraduate course work in RPL, which is determined by the student and graduate advisor.

B. If the last 60 hours GPA is below 3.0, the student must attain a GPA of 3.00 in the first 12 semester hours of graduate courses.

Degree Requirements

Core Courses (9-12 hours)

Select hours (based on entry-level competencies)

PES 670/HSC 670 - Research Methods for Physical Education and Sport, Health and Recreation 3(3-0)
RPL 605 - Administration of Leisure Services Systems 3(3-0)
RPL 611 - Evaluation in Recreation and Leisure Services 3(3-0)
RPL 618 - Issues in Leisure 3(3-0)

Concentration

Select one of the following:

Recreation and Park Administration Concentration

Required Courses (6-9 hours)

Select from the following:

PES 672 - Statistics for Physical Education and Sport, Health and Recreation 3(3-0)
RPL 508QR - Budgeting and Funding for Leisure Service Agencies 3(3-0)
RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)
RPL 521 - Fund Development & Grant Writing for Public & Non-Profit Organizations 3(3-0)
RPL 545 - Marketing of Leisure Services 3(3-0)
RPL 552 - Environmental Interpretation 3(3-0)
RPL 620 - Planning for Parks and Recreation Facilities 3(3-0)

Other courses may be selected in consultation with advisor.

Note: PES 672 is required for students completing a thesis for the Scholarly Option.

Therapeutic Recreation Concentration

Required Courses (6 hours)

Select from the following:

PES 672 - Statistics for Physical Education and Sport, Health and Recreation 3(3-0)
RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)
RPL 521 - Fund Development & Grant Writing for Public & Non-Profit Organizations 3(3-0)
RPL 580 - Programming for Therapeutic Recreation 3(3-0)
RPL 581 - Therapeutic Recreation Issues and Trends 3(3-0)

Other courses may be selected in consultation with advisor.

Note: PES 672 is required for students completing a thesis for the Scholarly Option.

(Continued)
National Certification: For national certification, a Therapeutic Recreation student must have an internship/practicum; complete a total of 18 semester units in therapeutic recreation and general recreation content coursework with no less than a minimum of 9 of those units completed in therapeutic recreation content (each content course must be taken for a minimum of 3 units); a total of 18 semester units of support coursework in the professional academic path with a minimum of 3 semester hours in anatomy and physiology, 3 semester hours in abnormal psychology, and 3 semester hours in human growth and development. The remaining semester hours must be fulfilled in supportive courses from any three of the following: psychology, sociology, adapted PE, biological/physical sciences, human services, or special education. (This is not required for graduation in the TR curriculum, but is required if one desires to apply for certification as a Certified Therapeutic Recreation Specialist).

Scholarly Option (6 hours)
Select one of the following:
RPL 698 - Graduate Internship 1-6(Spec)
RPL 699 - Graduate Project 1-6(Spec)
RPL 798 - Thesis 1-6(Spec)

Electives (6-9 hours)
Select in consultation with advisor.

Total: 33 semester hours

Master of Arts (M.A.) or Graduate Certificate in Cultural Resource Management
These programs are interdisciplinary. Please see the index for the page number.

Course Descriptions: RPL

RPL 508QR Budgeting & Funding for Leisure Service Agencies 3(3-0)
Budgetary and fund development procedures for leisure service agencies. Quantitative Reasoning. Prerequisites: RPL 204 or RPL 216 or RPL 261 or graduate status. Pre/Co-requirements: RPL 358 or RPL 430 or RPL 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)
This course explores the philosophical, social, and historical foundations of parks, recreation and leisure. Develops skills for research 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-requirements: RPL 405 or 508 or senior or graduate status.

RPL 545 Marketing of Leisure Services 3(3-0)
Provides a basis for applying marketing principles and techniques to the provision of leisure service experiences. This course is approved for offering in a distance learning format. Prerequisites: 6 credits in RPL or signed Event Management minor or graduate status.

RPL 552 Environmental Interpretation 3(3-0)
Development of the skills to produce and implement interpretive programs in parks, camps, natural areas, and visitor and nature centers located in urban and rural areas. 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 580 Programming for Therapeutic Recreation 3(3-0)
Programming techniques for Therapeutic Recreation. Prerequisites: RPL 210 or graduate status. Pre/Co-Requirements: Two of the following: RPL 340, 341, 342, 344, 345.
School of Rehabilitation and Medical Sciences
(PHA, PTH, ATR)
The Herbert H. and Grace A. Dow College of Health Professions

René R. Shingles, Chairperson
HPB 1232, (989) 774-2347

John M. Andraka, P.T., DPT, OCS, CSCS
Elaine Betts, P.T., Ph.D.
Raju Chowdary, PT, MHS, NCS, GCSS
Jessica Gordon Rose, PA, M.Ed.
Karen Grossnickle, P.T., M.S.
Ahmad Hakemi, M.D.
Linda Hall, P.T., M.S., DPT
Lixin Li, Ph.D., MD
John E. Lopes, Jr., DHSc, PA-C
Peter Loubert, P.T., Ph.D.
Elizabeth Mostrom, P.T., Ph.D.
Jan Perkins, P.T., Ph.D.
Jennifer Sansom, P.T., MPT, M.S., Ph.D.
René R. Shingles, Ph.D., AT, ATC
Deb Silkwood-Sherer, P.T., M.S., DHA, HPCS
Matthew Stack, PA, M.S.
Ksenia Ustilova, P.T., Ph.D.
Robert Wintermyer, Ph.D., MSPA, LLP, M.A., PA-C
J. Tim Zipple, P.T., M.S., OCS, DScPT, FAAOMPT

Master of Science (M.S.) in Physician Assistant Program
Minimum Totals for Graduation: 130 hours
http://chp.cmich.edu/pa

Admission Requirements, Retention & Termination Standards

<table>
<thead>
<tr>
<th>Admission Requirement Snapshot</th>
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<tr>
<td>GPA: 3.0</td>
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<td>Entrance Exam: GRE</td>
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<tr>
<td>Application Deadline: September 1, 2015 (for the 2016 entering class, which is a firm deadline)</td>
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<tr>
<td>See Admission Requirement Details Below</td>
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</table>

Admission Requirements for 2016 Entering Class

Please reference the PA Admission website http://chp.cmich.edu/pa-admissions to determine application requirements. The application deadline for the 2016 entering class is September 1, 2015, which is a firm deadline. Official GRE and TOEFL (if applicable) scores must be submitted electronically from ETS to CASPA and received by September 1, 2015. The GRE code for electronic mailing from ETS to CASPA is: 0518 Central MI U CASPA. Admission to the program is competitive. For more information, contact The Herbert H. and Grace A. Dow College of Health Professions Admissions Office (989-774-1730) or log on to our website to determine course equivalencies: https://www.cmich.edu/colleges/CHP/hp_academics/physician_assistant/admissions/Pages/Course-Equivalencies.aspx. The final decision regarding whether a course satisfies a prerequisite will be determined by the program director of the Physician Assistant Program.

At CMU, these prerequisites are met by:
• Anatomy: BIO 337 OR HSC 214
• Physiology: BIO 392 OR HSC 215
• Pathophysiology: HSC 411
• Microbiology: BIO 208 (New requirement effective 2016 application cycle)

Chemistry Courses:
• General Chemistry - CHM 120 and 127 OR CHM 131 and 132
• Organic Chemistry - CHM 342 OR 345, 346 and 349
• Biochemistry - CHM 421 OR 425

Psychology Courses:
• Introductory Psychology - PSY 100
• Developmental Psychology - PSY 220

Statistics Courses:
• Biostatistics - HSC 544 OR BIO 500 OR STA 282 OR PSY 211

Like all programs that have competitive admissions, students meeting the admission criteria are not guaranteed admission to the program.

(Continued)
Degree Requirements

First Year - Summer (15 hours)
HSC 630 - Regional Human Anatomy 5(3-4)
PHA 624 - Issues in Practice 2(2-0)
PHA 633 - Scientific Basis of Medicine I 2(2-0)
PHA 660 - History and Physical Examination I 3(2-2)
PHA 671 - Preventive Medicine 1(1-0)
PHA 672 - Applied Ethics for Physician Assistants 2(2-0)

First Year - Fall (22 hours)
PHA 608 - Clinical Medicine I 4(4-0)
PHA 620 - Infectious Diseases 3(3-0)
PHA 625 - Clinical Pharmacology I 3(3-0)
PHA 634 - Scientific Basis of Medicine II 2(2-0)
PHA 640 - Clinical Problem Solving I 3(0-11)
PHA 645 - Critical Appraisal of Medical Literature and Evidence-Based Medicine 2(0-0)
PHA 650 - Diagnostic Tests I 2(1-2)
PHA 661 - History and Physical Examination II 3(2-2)

First Year - Spring (25 hours)
PHA 609 - Clinical Medicine II 4(4-0)
PHA 612 - Obstetrics/Gynecology 3(3-0)
PHA 626 - Clinical Pharmacology II 3(3-0)
PHA 630 - Clinical Procedures I 3(2-2)
PHA 641 - Clinical Problem Solving II 3(0-11)
PHA 651 - Diagnostic Tests II 2(2-0)
PHA 662 - History and Physical Examination III 4(2-4)
PHA 673 - Psychiatry 3(3-0)

Second Year - Summer (20 hours)
PHA 610 - Clinical Medicine III 3(3-0)
PHA 614 - Pediatrics 3(3-0)
PHA 616 - Surgery 2(2-0)
PHA 618 - Emergency Medicine 2(2-0)
PHA 631 - Clinical Procedures II 3(0-6)
PHA 635 - Scientific Basis of Medicine III 2(2-0)
PHA 642 - Clinical Problem Solving III 3(0-11)
PHA 652 - Diagnostic Tests III 2(1-2)

Second Year - Fall (16 hours)
PHA 690 - Clinical Education I 16(0-40)
PHA 691 - Clinical Education II 16(0-40)

Second Year - Spring (16 hours)
PHA 692 - Clinical Education III 16(0-40)

Total: 130 semester hours

Course Descriptions: PHA

PHA 608 Clinical Medicine I 4(4-0)
Comprehensive survey course that studies prioritized medical topics within organ systems. The systems covered are otolaryngologic, ophthalmologic, cardiovascular and respiratory systems. Prerequisites: admittance to the Physician Assistant program.

PHA 609 Clinical Medicine II 4(4-0)
A comprehensive survey course that studies prioritized medical topics within organ systems. The systems covered are the gastrointestinal, hepatobiliary, genitourinary, endocrine, hematological systems and oncology. Prerequisites: admittance to the Physician Assistant program and PHA 608.

PHA 610 Clinical Medicine III 3(3-0)
Comprehensive survey course that studies prioritized medical topics within organ systems. The topics covered are the immunologic, musculoskeletal and neurologic systems and geriatrics. Prerequisites: admittance to the Physician Assistant program and PHA 609.

PHA 612 Obstetrics/Gynecology 3(3-0)
Prioritized instruction in normal function and selected medical conditions in women’s health including pregnancy, childbirth, neonatal and endocrine changes. Prerequisites: admittance to the Physician Assistant program.

PHA 614 Pediatrics 3(3-0)
A survey course of growth, development and diseases from birth to adolescence. It prepares students for the primary care clinical setting. Prerequisites: admittance to the Physician Assistant program.

PHA 616 Surgery 2(2-0)
Survey course that focuses on pre-, peri- and postoperative care and medical considerations of the surgical patient and prepares the student for the clinical setting. Prerequisites: admittance to the Physician Assistant program.

PHA 618 Emergency Medicine 2(2-0)
Survey course that familiarizes the student with common emergency medicine problems and injuries utilizing a priority system. Prerequisites: Admittance to the Physician Assistant Program.

PHA 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

PHA 620 Infectious Diseases 3(3-0)
A comprehensive survey course on the diagnosis and treatment of infectious diseases seen in primary care medicine and organized by organ system. Prerequisites: admittance to Physician Assistant program.

PHA 624 Issues in Practice 2(2-0)
Topics concerning physician assistant professional practice. CR/NC only. Prerequisites: Admission to the Physician Assistant Program.

PHA 625 Clinical Pharmacology I 3(3-0)
Survey course that emphasizes principles of pharmacology, pharmacokinetics and pharmacotherapy as they relate to drugs in the treatment of common primary care conditions. Prerequisites: admittance to Physician Assistant program.

PHA 626 Clinical Pharmacology II 3(3-0)
This clinical survey course continues instruction in pharmacology of select drugs, prescription essentials general pharmacology resources for the primary care practitioner. Prerequisites: admittance to Physician Assistant program, PHA 625.

PHA 630 Clinical Procedures I 3(2-2)
Integrated didactic and laboratory course which develops medical procedural diagnostic and therapeutic skills. This prepares the student for the clinical setting. CR/NC only. Prerequisite: admission to the Physician Assistant program.

PHA 631 Clinical Procedures II 3(0-6)
A two module course consisting of Advanced Cardiac Life Support and Pediatric Advanced Life Support. CR/NC only. Prerequisite: Admission to the Physician Assistant Program.

PHA 633 Scientific Basis of Medicine I 2(2-0)
An in depth review of the normal and abnormal physiologic processes associated with diseases of the cardiac and pulmonary organ systems. Prerequisites: Admission to the Physician Assistant Program.

PHA 634 Scientific Basis of Medicine II 2(2-0)
An in-depth review of the normal and abnormal physiologic processes associated with diseases of the renal, neurological, and endocrine system. Prerequisites: Admission to the Physician Assistant Program.

PHA 635 Scientific Basis of Medicine III 2(2-0)
An in-depth review of the normal and abnormal physiologic processes associated with diseases of the gastrointestinal system, immune system, heritable conditions, and spontaneous genetic abnormalities. Prerequisites: Admission to the Physician Assistant Program.

PHA 640 Clinical Problem Solving I 3(0-11)
Onsite interactive group problem solving sessions and offsite patient/student/preceptor clinical interactions. Both modes develop clinical diagnostic reasoning by focusing on a hypothetic-deductive approach. Prerequisites: admission to the Physician Assistant program; successful completion of the didactic portion of the curriculum.

PHA 641 Clinical Problem Solving II 3(0-11)
Onsite interactive problem solving sessions and offsite patient/student/preceptor clinical interactions. Both modes develop clinical diagnostic reasoning by focusing on a hypothetic-deductive approach. Prerequisites: admission to the Physician Assistant program; successful completion of PHA 640.

PHA 642 Clinical Problem Solving III 3(0-11)
Onsite interactive problem solving sessions and offsite patient/student/preceptor clinical interactions. Both modes develop clinical diagnostic reasoning by focusing on a hypothetic-deductive approach. Prerequisites: admission to the Physician Assistant program; successful completion of PHA 641.

PHA 645 Critical Appraisal of Medical Literature and Evidence-Based Medicine 2(2-0)
Students will develop the ability to critically analyze current and past medical research and publications, and apply those concepts to the practice of evidence-based medicine. Prerequisites: Admission into the Physician Assistant Program.

PHA 650 Diagnostic Tests I 2(1-2)
An introduction to the indications for and interpretation of the chest radiograph and electrocardiogram. Prerequisites: Admission into the Physician Assistant Program.

PHA 651 Diagnostic Tests II 2(2-0)
Indications for and interpretation of laboratory, pulmonary function, and neurophysiologic testing. Prerequisites: PHA 650.
The professional curriculum in physical therapy is three years in length. Students are eligible to apply for admission to the Doctoral Program in Physical Therapy following the completion of undergraduate coursework. Students must complete both the requirements for their undergraduate major and the physical therapy prerequisite courses before entering the program. At the completion of the professional program, the student will receive a Doctor of Physical Therapy (D.P.T.).

In the undergraduate preparation phase, the student can enroll in one of a number of appropriate undergraduate majors. Some suggested undergraduate majors include exercise science, athletic training, health administration, biomedical science, biology, neuroscience, psychology, child development, and therapeutic recreation. Students must contact an advisor from their chosen undergraduate major during their first semester to identify the coursework that is needed for their undergraduate degree. Students also need to incorporate into their undergraduate program a series of prerequisite courses that are required to prepare them for the coursework in the graduate program in physical therapy.

Admission Requirements, Retention & Termination Standards

**Admission Requirement Snapshot**

<table>
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<tr>
<th>GPA</th>
<th>Entrance Exam: GRE</th>
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<tr>
<td>3.0</td>
<td>Application Deadline: See the complete Application Process Instruc- tions referenced below</td>
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**Admission to the Professional Curriculum**

The Doctor of Physical Therapy Program uses the PTCAS (Physical Therapy Centralized Application Service), an online application service. For complete instructions on the application process go to the Physical Therapy Application Requirements web-page: https://centrallink.cmich.edu/academics/health_professions/hp_academics/physical_therapy/Pages/Admissions.aspx.

To be eligible for admission students must complete the following requirements:

2. Complete a minimum of 50 hours of volunteer/career exploration or paid work in physical therapy clinic. Experience in at least 2 different settings is required.
3. Complete all prerequisite courses before entry into the program.
4. Maintain a minimum GPA of 3.0 in all prerequisite courses with no grade below a 2.0 in any prerequisite course.
5. Complete undergraduate degree with a minimum GPA of 3.0.
6. Students must submit their GRE scores.

Admission into the Doctoral Program in Physical Therapy is competitive. Students should contact The Herbert H. and Grace A Dow College of Health Professions Admissions office for specific information or questions on this process. (989) 774-1730.

**Retention and Dismissal**

Students will be placed on probation for:

1. Any grade below a C (2.0) or NC (NC) in any course required in the PT professional curriculum will result in a student being placed on probation.
2. A semester GPA below 3.0 for courses required in the PT curriculum will result in a student being placed on probation.
3. A cumulative GPA below 3.0 for any semester will result in a student being placed on probation.
4. Students may be dismissed from the program for:
   1. Two consecutive semesters of probation.
   2. Failure to satisfactorily complete remedial work required to be taken off probation.
   3. Failure to satisfactorily complete a repeated course at a level of CR (credit) or C or above.
   4. Student shows multiple academic or clinical deficits to a degree that makes it unlikely the student will be able to succeed in the remainder of the curriculum.
   5. Accumulative GPA below 3.0 (graduate) in the professional portion of the physical therapy curriculum for two semesters.
   6. Failure (NC) of clinical affiliation/internship courses.
   7. Students who display a lack of professional conduct and/or any behavior patterns that may jeopardize the safety or well-being of patients or others; this includes students who do not demonstrate satisfactory performance or progress in Generic Abilities in academic or clinical courses.
   8. Students who participate in unethical or illegal activity including, but not limited to, academic dishonesty or violations of the APTA Code of Ethics and Guide for Professional Conduct.

(Continued)
Degree Requirements

First Year I - Summer (8 hours)
- HSC 630 - Regional Human Anatomy 5(3-4)
- PTH 615 - Principles of Pharmacology 1(1-0)
- PTH 618 - Human Physical Development 2(2-0)

First Year II - Fall (16 hours)
- HSC 631/PE5 631 - Physiology of Exercise 4(3-2)
- PTH 617 - Clinical Pathophysiology I 1(1-0)
- PTH 626 - Neuroanatomy in Physical Therapy 3(3-0)
- PTH 635 - Examination and Diagnosis II 2(1-2)
- PTH 645 - Patient Care I 3(3-4)
- PTH 665 - Physical Therapy Seminar I 1(1-0)

First Year III - Spring (16 hours)
- PTH 622 - Clinical Pathophysiology II 1(1-0)
- PTH 633 - Clinical Education I 3(1-4)
- PTH 636 - Examination and Diagnosis II 2(1-2)
- PTH 646 - Patient Care II 3(3-4)
- PTH 666 - Physical Therapy Seminar II 1(1-0)
- PTH 672 - Clinical Anatomy and Kinesiology of Human Joints 4(3-3)

Second Year I - Summer (12 hours)
- HSC 670/PE5 670 - Research Methods for Health, Physical Education and Sport, Health and Recreation 3(3-0)
- PTH 634 - Clinical Education II 6(Spec)
- PTH 655 - Teaching and Learning in Physical Therapy 2(2-0)
- PTH 661 - Manual Therapy I 1(0-2)

Second Year II - Fall (14 hours)
- PTH 623 - Clinical Pathophysiology III 1(1-0)
- PTH 690 - Motor Learning in Neurorehabilitation 2(2-0)
- PTH 732 - Clinical Education III 3(1-4)
- PTH 735 - Examination and Diagnosis III 2(1-2)
- PTH 745 - Patient Care III 3(3-4)
- PTH 765 - Physical Therapy Seminars III 1(1-0)

Second Year III - Spring (17 hours)
- PTH 620 - Clinical Management of Geriatric Patients 2(2-0)
- PTH 621 - Clinical Pediatrics 2(2-0)
- PTH 624 - Clinical Pathophysiology IV 1(1-0)
- PTH 662 - Manual Therapy II 2(0-4)
- PTH 695 - Ethics in Physical Therapy 3(3-0)
- PTH 736 - Examination and Diagnosis IV 2(1-2)
- PTH 746 - Patient Care IV 4(3-2)
- PTH 766 - Physical Therapy Seminars IV 1(1-0)

Third Year I - Summer (12 hours)
- PTH 710 - Principles of Clinical Management 3(3-0)
- PTH 825 - Health Promotion in Physical Therapy Practice 2(2-0)
- PTH 850 - Evidence Based Practice in Physical Therapy 2(2-0)
- PTH 860 - Health Informatics for Physical Therapists 2(2-0)
- PTH 870 - Rehabilitation Care Management 3(3-0)

Third Year II - Fall (16 hours)
- PTH 790 - Clinical Research I 4(4-0)
- PTH 832 - Clinical Education IV 12(Spec)

Third Year III - Spring (16 hours)
- PTH 890 - Clinical Research II 4(4-0)
- PTH 932 - Clinical Education V 12(Spec)

Electives
- 3-4 hours of PTH electives.

Total: 118-131 semester hours

Note: The total number of credit hours required for completion of the program may be reduced by up to 12 credit hours based on a student’s prior course work or experiences. The previous course work or experience must have provided the student with the equivalent knowledge and skills presented in the specific required course(s) within the DPT curriculum. The faculty of the Physical Therapy Program will make the determination on whether a student’s previous course work and experience are equivalent to the content of a specific course.

Additional Program Requirements:

Doctoral Research Project: Students must complete a Doctoral Research Project in Clinical Research I and II (PTH 790 and 890).

To fulfill the requirements for PTH 790 and 890 the student must complete either:
   a. a prospective research project or
   b. a clinical case report. Students must submit final manuscripts in publication form according to program guidelines.

At the completion of the professional curriculum, students will receive a Doctor of Physical Therapy (DPT) degree.

Accreditation

The Doctoral Program in Physical Therapy at Central Michigan University is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 111 North Fairfax Street, Alexandria, Virginia 22314; telephone: 703-706-3245; email: accreditation@apta.org; website: www.capteonline.org. The Central Michigan University Doctor of Physical Therapy Program at Michigan Technological University is accredited by the Commission on Accreditation in Physical Therapy Education as an expansion program of the Doctor of Physical Therapy Program at Central Michigan University.

Course Descriptions: PTH

PTH 615 Principles of Pharmacology 1(1-0)
Provides students with an introduction to the principles of pharmacology with an emphasis on understanding how drug therapy is utilized in rehabilitation. Prerequisites: admission to Physical Therapy Program.

PTH 617 Clinical Pathophysiology I 1(1-0)
Study of the body’s physiological responses to disease states with emphasis on the clinical management pertinent to physical therapy practice. Prerequisite: admission to the physical therapy program.

PTH 618 Human Physical Development 2(2-0)
Examination of life stages and their relationship to patient conditions seen in physical therapy. The developmental foundations of therapeutic procedures are discussed. Prerequisite: admission to the Physical Therapy program.

PTH 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

PTH 620 Clinical Management of Geriatric Patients 2(2-0)
Study of clinical management of geriatric patients. Physiological aspects of aging musculoskeletal, neurological, and cardiopulmonary systems are emphasized. Prerequisite: admission to the Physical Therapy program.

PTH 621 Clinical Pediatrics 2(2-0)
Students will learn evaluation procedures and strategies for clinical management of the pediatric patient. Prerequisites: PTH 618, admission to the Physical Therapy program.

PTH 622 Clinical Pathophysiology II 1(1-0)
Study of physiological responses to disease states associated with the musculoskeletal system. Emphasis is placed on the clinical management pertinent to physical therapy practice. Prerequisites: PTH 622, admission to the Physical Therapy program.

PTH 623 Clinical Pathophysiology III 1(1-0)
Study of physiological responses to disease states associated with the nervous system. Emphasis is placed on the clinical management pertinent to physical therapy practice. Prerequisites: PTH 622, admission to the Physical Therapy program.

PTH 624 Clinical Pathophysiology IV 1(1-0)
Study of physiological responses to cancer and to diseases of the endocrine, cardiovascular, and respiratory systems. Physical therapy clinical management is emphasized. Prerequisites: PTH 623, admission to the Physical Therapy program.

PTH 626 Neuroanatomy in Physical Therapy 3(3-0)
Introduction to functional neuroanatomy as it relates to physical therapy. Case studies are used to relate implications of neurological lesions with physical therapy intervention. Prerequisites: admission to the Physical Therapy program.

PTH 633 Clinical Education I 3(1-4)
A mock clinic format is utilized to introduce the student to specific clinical situations and case studies. Problem-solving, interaction and technical skills analyzed. CR/NC only. Prerequisites: admission to the Physical Therapy program. Concurrent enrollment in PTH 646.

PTH 634 Clinical Education II 6(Spec)
This course provides one six-week full-time clinical experience for physical therapy students in physical therapy practice settings. Focus of experience is orthopedic disorders. CR/NC only. Prerequisites: PTH 633 and permission of instructor.
Course Descriptions:

**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. This course may be offered in an online or hybrid format. Prerequisites: Determined specific to the topic presented. See Course Search and Registration.

**ATR 586 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. This course may be offered in an online or hybrid format. Prerequisites: Determined specific to the topic presented. See Course Search and Registration.

**ATR 587 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. This course may be offered in an online or hybrid format. Prerequisites: Determined specific to the topic presented. See Course Search and Registration.

**ATR 588 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. This course may be offered in an online or hybrid format. Prerequisites: Determined specific to the topic presented. See Course Search and Registration.

**ATR 589 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. This course may be offered in an online or hybrid format. Prerequisites: Determined specific to the topic presented. See Course Search and Registration.

**ATR 590 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. This course may be offered in an online or hybrid format. Prerequisites: Determined specific to the topic presented. See Course Search and Registration.

**ATR 591 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. This course may be offered in an online or hybrid format. Prerequisites: Determined specific to the topic presented. See Course Search and Registration.
Department of Sociology, Anthropology, and Social Work (SOC, ANT, SWK)

College of Humanities and Social & Behavioral Sciences

Katherine Rosier, Chairperson
142 Anspach Hall (989) 774-3160

Mensah Adinkrah, Ph.D., Criminology, Homicide
Elbert Almazan, Ph.D., Medical Sociology, Youth Studies
Brigette H. Bechtold, Ph.D., Research Methods, Political Economy, Population Studies, Social Policy
Tracy Brown, Ph.D., Native American Cultures, Gender
Rachel Caspari, Ph.D., Physical Anthropology, Race
Sergio Chavez, Ph.D., Archaeology
Laura Cochrane, Ph.D., Africa, Anthropology of Religion
Susan Grettenberger, Ph.D., Social Work, Social Welfare Policy, Non-Profit Organizations
Nancy J. Herman-Kinney, Ph.D., Symbolic Interactionism, Social Psychology, Qualitative Methods
David A. Kinney, Ph.D., Sociology of Education, Research Methods
Athena McLean, Ph.D., Medical Anthropology, Aging, Social Production of Knowledge
Harry Mika, Ph.D. Crime and Social Justice, Alternative Dispute Resolution
Gary Miller, Ph.D., Policy, Research Methods
Gil Richard Musolf, Ph.D., Sociological Theory, Symbolic Interactionism
Robert G. Newby, Ph.D., (Emeritus) Racism and Inequality, Social Psychology, Educational Sociology
Katherine Rosier, Ph.D., Childhood, Social Psychology, Family
Alan Rudy, Ph.D., Political Economy, Environmental Sociology, Sociology of Science and Technology
Mary S. Senter, Ph.D., Stratification, Gender, Applied Sociology
Brian Smith, Ph.D., Juvenile Justice
Justin Smith, Ph.D., Race and Justice, Criminology, Social Inequalities
Carmen White, Ph.D., Educational Anthropology, Ethnicity and Ethnic Relations, Oceanic Cultures

Scholarships and Awards

Edward E. McKenna Academic Excellence Award
Established in 1998 in memory of this dedicated teacher, scholar, and unionist by the Department of Sociology, Anthropology, and Social Work. Endowment earnings will provide cash awards for winning authors of an annual undergraduate and graduate paper competition

Bernard N. Meltzer Scholarship
Established by friends in honor of Bernard N. Meltzer, former faculty member and chairperson of the Department of Sociology, Anthropology, and Social Work, for a graduate student in sociology.

Master of Arts (M.A.) or Graduate Certificate in Cultural Resource Management

These programs are interdisciplinary. Please see the index for the page number.

Course Descriptions: SOC

SOC 501 Development of Sociological Theory 3(3-0)
in-depth analysis of classical sociological theory focusing on Marx, Durkheim, Weber, and Mead. The historical and intellectual context in which these theorists wrote is emphasized. Prerequisites: SOC 100, 201, 221; or graduate standing.

SOC 502 Theories of Race Relations in Sociology 3(3-0)
Contributions to sociological theories of race and ethnic relations by major theorists. This course may be offered in an online or hybrid delivery format. Prerequisites: SOC 301, 323, 350; or regular admission to the Sociology graduate program.

SOC 506 Comparative Cultural Systems 3(3-0)
Explores theories of cultural development, with particular emphasis on urban and post-industrial cultures. Students investigate cultures different from their own. Identical to ANT 506. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisite: One anthropology or sociology course.

SOC 507 Class and Poverty in America 3(3-0)
Examination of theories of social class and their application to American society. Review of empirical literature on class and poverty in the U.S. Prerequisites: SOC 300 or SOC 200, 350; SOC 301; or admission to Graduate Program.

SOC 512 Industrial Sociology 3(3-0)
Characteristics of industrial societies. Relationship of the organization of industrial work to that of nonwork culture, institutions, and roles. Prerequisites: SOC 300 or both SOC 200 and 350; SOC 301; or regular admission to the Sociology Graduate Program.

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 IBB 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 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, 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 531 Capstone Experience in Global Justice 3(3-0)
Capstone course synthesizes course work on the issues of global social justice/ injustice. Explores roots, consequences, types, policy approaches, and strategies for pursuing global justice. Identical to ANT 531. Credit may not be earned in more than one of these courses. Prerequisites: SOC/ANT 101; 15 hours in the Global Justice Minor; Completion of the Service Learning component of the Global Justice Minor; and Approval of the Global Justice Advisor. May be taken by SOC or ANT Majors with the approval of the Global Justice Advisor. Or, graduate standing.

SOC 532 Global Aging: Cross-Cultural Aging in a Globalized World 3(3-0)
Comparative study of cultural shapings, expressions and experiences of contemporary aging. Social and cultural responses to perceived problems of aging. Transformations of aging under globalization. Cross listed with ANT 532. Credit may only be earned for one of these courses. Prerequisite: Six credits of cultural anthropology, gerontology and/or sociology.

SOC 590 Gender, Culture & Society 3(3-0)
Analysis of gender roles in various cultures; theoretical approaches to explaining gender role variation. Identical to ANT 590 and WST 590. Credit may not be earned in more than one of these courses. Prerequisites: 6 hours of anthropology and/or sociology and/or women's studies.

SOC 599 Special Topics in Sociology 1-10(Spec)
Consideration of subject-matter not included in courses currently listed in catalog.

SOC 601 Contemporary Sociological Theory 3(3-0)
Analysis of social theories of knowledge, postcolonialist social theory, post-colonialism, feminism, black feminist thought, interactionism, critical theory, postmodernism, and other sociological theories of contemporary relevance. Prerequisite: 15 hours of sociology and graduate standing.

SOC 602 Profession in Seminar 3(3-0)
Techniques of thesis writing; development of thesis prospectus. The research of departmental faculty is presented and discussed. Prerequisites: Regular admission to the Sociology Graduate Program.

SOC 605 Sociology of Knowledge 3(3-0)
Relationship of ideas to social life. The intellectual in society; relationship of empirical knowledge to cultural values and ideologies; objectivity in sociology. Prerequisite: SOC 301 or SOC 501.

SOC 607 Methodology of Sociological Research 3(3-0)
Exploration and critique of various epistemological approaches to sociological inquiry. Research design, concept development, nature of data, introduction to qualitative and quantitative methods. Prerequisites: SOC 200 and 350; and permission of instructor.

SOC 611 Human Diversity Within and Between Families 3(3-0)
Diverse backgrounds of families/individuals based on ethnicity, religion, sexual orientation, class and disabilities will be studied. Models to explore the diverse nature will be applied. Identical to HDF 603. Credit may not be earned in more than one of these courses.

SOC 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

SOC 621 Social Control and Justice Systems 3(3-0)
Formal and informal responses to crime and delinquency, analyzed in terms of criminology theory and research and with reference to concepts of social control. Prerequisites: SOC 300, and SOC 301 or SOC 501.

SOC 631 Workshop on Qualitative Research 3(3-0)
This course is designed to introduce students to the various qualitative research methods in the social sciences. Prerequisites: SOC 607.

SOC 632 Techniques of Sociological Research 3(3-0)
Analysis of quantitative social science data. Hypothesis testing and descriptive methods. Prerequisite: SOC 607.

SOC 699 Special Topics in Sociology 1-10(Spec)
Consideration of subject matter not included in courses currently listed in Bulletin. Not open to students on academic probation.

SOC 795 Independent Reading 1-6(Spec)
Prerequisite: Open to students who have obtained the permission of the department chairperson and an instructor to read intensively on an approved topic.

SOC 796 Independent Research 1-6(Spec)
Prerequisite: Open to students who have obtained the permission of the department chairperson and an instructor to conduct research on an approved topic.

SOC 798 Thesis 1-6(Spec)
Credit is earned in this course through successful completion of a thesis in sociology. Prerequisite: Advisor's permission is required. CR/NC only.

Course Descriptions: ANT

ANT 500 Field School in Archaeology 3(6-Spec)
Intensive practical experience in field survey, excavation, and laboratory analysis of resulting materials. Prerequisite: ANT 174 or 175 or 240; and permission of instructor.

ANT 506 Comparative Cultural Systems 3(3-0)
Explores theories of cultural development, with particular emphasis on urban and post-industrial cultures. Students investigate cultures different from their own. Identical to SOC 506. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisite: One anthropology or sociology course.

ANT 520 Medical Anthropology 3(3-0)
Transcultural variations in conceptions of health, illness, disease, sickness and healing; cultural practices and social, political, economic and global forces that impact these conditions. Prerequisites: Six credits of cultural anthropology and/or sociology.

ANT 521 North American Indian Ethnography 3(3-0)
The history of Native American peoples in North America since 1492, impact of colonization and U.S. policy upon Native Americans, and ethnohistorical theory and methodology. Prerequisite: Senior standing and ANT 320 or 365 or HST 323; or graduate standing.

ANT 531 Capstone Experience in Global Justice 3(3-0)
Capstone course synthesizes course work on the issues of global social justice/ injustice. Explores roots, consequences, types, policy approaches, and strategies for pursuing global justice. Identical to SOC 531. Credit may not be earned in more than one of these courses. Prerequisites: SOC/ANT 101; 15 hours in the Global Justice Minor; Completion of the Service Learning component of the Global Justice Minor; and Approval of the Global Justice Advisor. May be taken by SOC or ANT Majors with the approval of the Global Justice Advisor. Or, graduate standing.

ANT 532 Global Aging: Cross-Cultural Aging in a Globalized World 3(3-0)
Comparative study of cultural shapings, expressions and experiences of contemporary aging. Social and cultural responses to perceived problems of aging. Transformations of aging under globalization. Cross listed with SOC 532. Credit may only be earned for one of these courses. Prerequisite: Six credits of cultural anthropology, gerontology and/or sociology.

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. 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. Prerequisites: ANT 173, 342, or 347; or graduate standing.

ANT 544 Great Lakes Archaeology 3(3-0)
Examination of prehistoric cultural trends and societies in the Great Lakes region within the context of broader trends in eastern North America and impact of historic European settlement. Prerequisites: ANT 175; or Graduate standing.

ANT 588 Special Topics in Anthropology 1-10(Spec)
Analysis of gender roles in various cultures; theoretical approaches to explaining gender role variation. Identical to SOC 590 and WST 590. Credit may not be earned in more than one of these courses. (Not open to students who have completed ANT 490 or WST 490.) Prerequisites: 6 hours of anthropology and/or sociology and/or women's studies.

ANT 626 Theory and Research in Archaeology 3(3-0)
Historical growth of archaeology, nature of archaeological evidence, theoretical frameworks in interpretation and explanation of the human past, research strategies and design.

ANT 645 Cultural Resource Management in Archaeology 3(3-0)
Evaluation of the laws and practice of Cultural Resource Management (CRM) and applied archaeology within public, private, and governmental settings. May not be taken by students who have completed ANT 345.

ANT 698 Independent Studies in Anthropology 1-12(Spec)
Directed reading and/or research on an approved topic. Not open to students on academic probation.

ANT 798 Thesis 3-6(Spec)
Credit is earned in this course through the successful completion of a thesis in anthropology in consultation with a thesis advisor. Prerequisites: Successful completion of 6 hours of coursework in the Cultural Resource Management MA program.

Course Descriptions: SWK

SWK 597 Independent Study 1-12(Spec)
Directed reading or research on an approved topic. Prerequisite: Completion of at least 75 undergraduate credits or graduate standing. Recommended: SWK 100.

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 at least 75 undergraduate credits or graduate standing. Recommended: SWK 100.
Department of Teacher Education and Professional Development
(ECE, EDU, MLE)
College of Education and Human Services

https://www.cmich.edu/colleges/ehs/program/teach/Pages/Academic%20Programs/Graduate.aspx

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Shane Cavanaugh, Ph.D., educational psychology
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Larry Corbett, Ed.D., educational leadership (Chairperson)
Michael DeSchryver, Ph.D., Educational Psychology/Educational Technology
Kathryn Dirkin, Ph.D., educational technology
Karen Edwards, Ph.D., education administration, clinical supervision
Raymond Francis, Ed.D., curriculum and instruction/emphasis in clinical supervision
Tamara Jetton, Ph.D., curriculum and instruction
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William Leibfritz, Ph.D., elementary mathematics
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James McDonald, Ph.D., science education
Kathleen Moxley, Ph.D., teaching, curriculum, and educational policy language and literacy
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Howard Parkhurst, Ph.D., curriculum and instruction
Joseph Rivard, Ph.D., reading, educational psychology, educational technology
Leonie Rose, Ph.D., elementary education, literary education
Barbara Senesac, Ph.D., bilingual education, literacy education
Marguerite Terrill, Ph.D., secondary education
Elizabeth VanDeusen-MacLeod, Ph.D., reading education
Mingyuan Zhang, Ed.D., elementary education

The Department of Teacher Education and Professional Development offers six master’s degrees: (1) a Master of Arts in Early Childhood Education (2); (2) a Master of Arts in Educational Technology (K-12); (3) a Master of Arts in Elementary Education; (4) a Master of Arts in Reading and Literacy (K-12); (5) a Master of Arts in Middle Level Education; and (6) a Master of Arts in Secondary Education, and (7) a doctorate in Educational Technology (DET). Guide sheets specifying requirements, general elective courses, and other information for all the department’s Master of Arts programs may be obtained from 421 EHS Building or on the department website.

Master of Arts (M.A.) in Early Childhood Education

Minimum Totals for Graduation: 33 hours

Guide Sheets specifying requirements for all the department’s programs may be obtained from 421 EHS Building or online at http://www.tepd.cmich.edu/

Admission Requirements, Retention & Termination Standards

Admission
Regular admission in the program requires an undergraduate grade point average of at least 2.70 (on a 4-point scale). Students with a GPA below 2.50 will not be considered for candidacy for the graduate program in teacher education. A maximum of 9 hours taken before signing the master’s program may be counted on the program. To earn a CMU graduate level degree, students must have at least a 3.0 (B) cumulative GPA, and a cumulative GPA of 3.0 (B) in all coursework on the student’s authorization of degree program. Courses may apply toward ZS endorsement for those holding elementary certification and this program does not lead to initial elementary teacher certification.

Program Requirements
All candidates for the M.A. must fulfill requirements for scholarly activity under Plan A (thesis) or Plan B (comprehensive written exam or research paper).

Plan A requires a minimum of 27 hours of course work and a thesis (6 hours of thesis credit), total 33 credits.

Plan B requires a minimum of 30 hours of course work and a capstone seminar (EDU 780, 3 hours of credit), total 33 credits.

EDU 780 explores research pertinent to all Master of Arts in Elementary Education students, and a comprehensive four (4) hours examination over the coursework in the student’s M.A. program or an approved project. The examination over the coursework must be taken early in the term following the completion of EDU 780. Students will not need to register for a class or pay fees for the examination. The examination may be taken a maximum of two times. Specific descriptions of program requirements are available in 421 EHS Building or online.

Required Core Courses (15 hours)
Select one of the following plans:

Plan A
EDU 590/SPE 510 - Advanced Technology in Education 3(3-0)
EDU 660 - Methods of Educational Research 3(3-0)
EDU 698 - Thesis 1-6 (Spec)
SPE 585 - Early Childhood Special Education 3(3-0)

Plan B
ECE 777 - Seminar: Current Issues in Early Childhood Education 3(3-0)
EDU 590/SPE 510 - Advanced Technology in Education 3(3-0)
EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)
EDU 780/MLE 780 - Master of Arts Capstone Experience 3(3-0)
SPE 585 - Early Childhood Special Education 3(3-0)

Required Cognate Courses (18 hours)
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 & Practice 3(3-0)

Total: 33 semester hours
**Master of Arts (M.A.) in Reading and Literacy K-12**

**Minimum Totals for Graduation: 33 - 36 hours**

The Master of Arts in Reading and Literacy K-12 has been developed based on teacher preparation standards written by the International Reading Association (IRA) and the National Council of Teachers of English (NCTE) and adopted by the National Council for the Accreditation of Teacher Education (NCATE). In addition, the course work contains components to meet the standards approved by the Michigan State Board of Education for the Reading Specialist (BR) Endorsement (July 20, 2000). Any certified teacher meeting the requirements for entry into graduate studies at Central Michigan University is eligible to enter the program.

The Master of Arts in Reading and Literacy K-12 provides students with knowledge and skills in reading and writing programs K-12. The major objectives of the program will enable students to:

1. organize and implement school literacy programs
2. diagnose and treat difficulties in literacy
3. implement appropriate reading and writing instruction.
4. develop interdisciplinary and integrated units involving literacy.
5. conduct research about current issues of literacy.
6. develop technological and viewing skills related to literacy programs.

**Admission Requirements, Retention & Termination Standards**

**Admission Requirement Snapshot**

GPA: 2.7
Entrance Exam: N/A
Internet Application Deadline: July 1 (Fall), Oct. 1 (spring)
See Admission Requirement Details Below

**Admission**

In addition to the university’s general admission requirements, the student must have a valid K-12 teaching certificate or equivalent. Regular admission into the program requires an undergraduate grade point average of at least 2.70 (on a four point scale). Students with a GPA below 2.70 will not be considered for admission to the program.

A maximum of 9 hours taken before signing the master’s program may be counted toward the program. Students must earn a B- or better in each graded course.

**Program Requirement**

**Residence Requirement for Plan A and Plan B:** Students are required to complete a minimum of 12 semester hours of credit in graduate courses taken at the Mt. Pleasant campus or from Teacher Education Professional Development tenure and tenure-track faculty in coursework offered by CMU Global Campus.

**Required Courses - Reading & Literacy Concentration (18 hours)**

EDU 630 - Organization and Implementation of School Literacy Programs 3(3-0)
EDU 632 - Practicum in the Diagnosis and Treatment of Difficulties in Literacy 6(Spec)
EDU 636 - Classroom Reading and Writing Instruction 3(3-0)
EDU 641 - Interdisciplinary Processes and Strategies for Teaching Literacy 3(3-0)
EDU 730 - Seminar: Issues in Literacy 3(3-0)

**Core Courses**

Select one of the following plans:

**Plan A (15 hours)**

- EDU 613 - Current Educational Issues 3(3-0)
- EDU 660 - Methods of Educational Research 3(3-0)
- EDU 698 - Thesis 1-6(Spec)
- EDU 755 - Advanced Research Design and Interpretation 3(3-0)

**Plan B (18 hours)**

**Required Core (15 hours)**

- EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
- EDU 613/MLE 613 - Current Educational Issues 3(3-0)
- EDU 614 - Advanced Educational Psychology 3(3-0)
- EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)
- EDU 780/MLE 780 - Master of Arts Capstone Experience 3(3-0)

**Electives for Plan B (3 hours)**

An elective course may be selected from the following:

- EDU 528 - Emergent Literacy: Theory and Practice 3(3-0)
- EDU 538 - Coordination of the Language Arts with Reading 3(3-0)
- EDU 540 - Literacy Education: Theory and Practice 3(3-0)
- EDU 635 - Problems in Language Arts in the Elementary School 3(3-0)
- ENG 517 - Reading and the English Classroom 3(3-0)
- ENG 573 - Linguistics and Reading 3(3-0)
- ENG 580 - Literature for Young Adults 3(3-0)
- ENG 581 - The History of Children's Literature 3(3-0)
- ENG 582 - Cultural Pluralism in Young Adult and Children's Literature 3(3-0)
- ENG 681 - Seminar in Children's Literature 3(3-0)
- COM 569 - Communication in the Classroom 3(3-0)
- SPE 577 - Introduction to Specific Learning Disability 3(3-0)
- SPE 585 - Creative Dramatics 3(2-2)

**Note:** Plan B students must also take a comprehensive four (4) hour examination over the course work in the student’s M.A. program. This exam must be taken early in the term following the completion of EDU 780. Students will not need to register or pay fees for this exam. The exam may be taken a maximum of two times. Specific descriptions of the program and exam requirements are available in EHS 421 or online.

**Total: 33-36 semester hours**

**Note:** Plan A requires a total of 33 hours. Plan B requires a total of 36 hours

**Graduate Certificate in Educational Technology**

**Minimum Totals for Graduation: 15 hours**

The Graduate Certificate in Educational Technology program prepares educators and other educational professionals to effectively utilize new learning technologies. The technologies addressed in this program include multimedia, handheld devices, distance, and telecommunications in education. Designed to meet the needs of educators and other educational professionals, this program also prepares individuals for classroom technology support roles.

**Required Courses**

- EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
- EDU 642 - Instructional Multimedia 3(3-0)
- EDU 643 - Instructional Design 3(3-0)
- EDU 653 - The Read/Write Web 3(3-1)
- EDU 707 - Seminar: Issues in Educational Technology 3(3-0)

**Total: 15 credit hours**

**Note:** This Graduate Certificate in Educational Technology is not related to earning a teaching certificate.
Master of Arts (M.A.) in Educational Technology

Minimum Totals for Graduation: 33 hours

The Educational Technology master’s degree program prepares students to provide instruction utilizing new learning technologies. The technologies addressed in this program include multimedia, telecommunications, and distance learning. While meeting the needs of the classroom teacher, this program also prepares individuals for technology leadership roles.

The degree program requires a minimum of 33 hours and all candidates for the MA must complete the Educational Technology Seminar, resulting in a terminal project. Educational Technology projects must demonstrate effective uses of technology in K-12 classroom settings.

Admission Requirements, Retention & Termination Standards

GPA: 2.7

Entrance Exam: N/A

Admission Requirement Snapshot

Intern'l Application Deadline: July 1 (Fall), Oct. 1 (spring)

See Admission Requirement Details Below

In addition to the university’s general admission requirements, the student must either hold a valid K-12 teaching certificate or be employed in an educational capacity within their school, school district, community college, or profession. Regular admission in the program requires an undergraduate grade point average of at least 2.7 (on a 4-point scale). Students with a GPA below 2.5 will not be considered for admission for the graduate program in teacher education. A maximum of 9 hours taken before signing the master’s program may be included in the 9 hours taken.

Advisors for the master’s program are assigned only after the student has been regularly or conditionally admitted to Graduate Studies at CMU and has selected an option.

Degree Requirements

Required Courses (12 hours)
- EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
- EDU 613/MLE 613 - Current Educational Issues 3(3-0)
- EDU 614 - Advanced Educational Psychology 3(3-0)
- EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)

Required Cognate Courses (18 hours)
- EDU 642 - Instructional Multimedia 3(3-0)
- EDU 643 - Instructional Design 3(3-0)
- EDU 653 - The Read/Write Web 3(3-1)
- EDU 707 - Seminar: Issues in Educational Technology 3(3-0)
- EDU 708 - Distance Education 3(3-0)
- EDU 710 - Seminar: Terminal Project 3(3-0)

Electives (3 hours)
Select from the following:
- EDL 610 - Grants and Fund Procurement 3(3-0)
- EDU 506 - Principles and Techniques for Individualizing Instruction 3(3-0)
- EDU 566 - Independent Study in Elementary Education 1-6(Spec)
- EDU 709 - Innovative Uses of Technology 3(3-0)

Total: 33 semester hours (minimum)

Doctor of Educational Technology (D.E.T.)

Minimum Totals for Graduation: 87 hours

This program is offered through Global Campus. The online doctoral program in educational technology prepares educators in the study of integration of technologies supporting learning and teaching. Specific instruction revolves around the study of the latest educational technologies to increase student achievement in the classroom. Graduates are prepared for careers in K-12 educational technology support, higher education research and teaching, research and development of instructional technologies, and private sector training and development.

The online Doctor of Educational Technology program at Central Michigan University offers students an opportunity to either earn a Master’s Degree or matriculate in two years of graduate credit if they currently hold an accredited graduate degree. Certified K-12 teachers in Michigan will also earn the “NP”- educational technology endorsement for their teaching certificate.

Students take an additional 36 credit hours of coursework (12 classes) beyond the Master’s level. Upon completion of the apprenticeship/comprehensive exam, students will enroll in 18 dissertation credits to include a proposal writing class.

Admission Requirements, Retention & Termination Standards

GPA: 3.5

Entrance Exam: GRE or MAT

Admission Requirement Snapshot

Priority Deadline: March 1

See Admission Requirement Details Below

In order to be considered for admission to the program, an applicant must have completed a master’s degree with a graduate program grade point average of 3.5 or higher, or currently enrolled in CMU’s online MA in Educational Technology program, and must have completed three years of professional education experience and the Graduate Record Exam or Miller Analogy Test.

Review of complete application begins March 1 and continues until the cohort is filled. A completed application packet will include the following materials:

1. a completed graduate application;
2. transcripts of all undergraduate and graduate work;
3. resume of professional education experience;
4. Graduate Record Exam (GRE) or Miller Analogy Test (MAT); within the past 5 years
5. short essay describing the relationship between the applicant’s professional goals and the D.E.T. program; and
6. three letters of recommendation (dated and on organizational letterhead) that attest to the applicant’s potential to succeed in the program.

After reviewing the credentials of the applicants, the Doctoral Program Committee will select those to be interviewed. The Doctoral Program Committee will make all decisions regarding admissions, selecting the cohort from those interviewed. The total application package will be evaluated holistically.

Proof of English Proficiency

Proof of English proficiency is required for admission to any of CMU’s graduate programs.

Although most international applicants meet that requirement by having an official TOEFL score report sent to us, there are other acceptable methods of proof. Students can meet the requirement by submitting IELTS scores or MELAB scores, or by having completed an entire course of study (bachelor’s degree, master’s degree, etc.) at an institution where the language of instruction is English. Test score requirements are:

TOEFL:
- Regular Admission: 79 ibt (550 pbt, 213 cbt)
- Conditional Admission: 61-78 (500-547, 173-210)
Program Requirements

Requirements I - Research (9 hours)
The research component encompasses both quantitative and qualitative research methods. The competencies to be developed are essential to interpreting and evaluating research studies to be encountered in all course work as well as to completing the dissertation requirement.

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)

Requirements II - Academic Core (12 hours)
The academic core component includes all of the critical areas of study for future educational leaders: foundations, organizational and leadership analyses, and the issues which change and dominate over time. The courses are designed to provide students with the underpinnings to understand and to act effectively upon the challenges confronting the educational organization.

EDU 807  Seminar: Learning Tools in Education Technology 3(3-0)
EDU 808  Blended and Online Learning 3(3-0)
EDU 814  Differentiated Instruction in Online Learning 3(0-0)
EDU 853  Evolving Internet Learning 3(3-0)

Requirements III - Cognate (15 hours)
There are multiple choices from which students may select a concentration. The specific courses will be determined in consultation between the student and the academic advisor. The cognate, to be determined jointly by the student and advisor, can be completed in one academic discipline or by taking a combination of courses from more than one academic discipline. Students could choose to take a "Leadership" cognate by taking 3 classes currently offered by Educational Leadership and two of the classes below as a cognate.

Educational Technology Cognate:
EDU 810  Grant Writing 3(3-0)
EDU 811  Motivation in Online and Blended Learning 3(3-0)
EDU 842  Mobile Learning 3(3-0)
EDU 862  Data Driven Decision Making 3(3-0)
EDU 870  Higher Order Learning and New Literacies 3(3-0)

Comprehensive Exams

Students will be expected to take written qualifying exams upon the completion of their academic core classes. Comprehensive exams will be administered in the fall and spring of each year. Upon successful completion of the comprehensive exam, students are advanced to candidacy.

Dissertation
EDU 898  Dissertation 1-18(Spec)
The candidate will complete three steps in the dissertation process:
1. the proposal review stage in which there is a formal review of the literature and a journal article submitted for publication; The proposal of the candidate’s research, the research question and methodology for conducting the research will be proposed and approved by the candidate’s dissertation committee;
2. conducting the research, analyzing the results, and writing the final document including a minimum of one journal article submitted for publication after successful defense; and
3. oral defense of the research.

Total: 87 semester hours
EDU 551 Driver Education II: Developing Classroom Instructional Knowledge 3(3-0)
Second of four courses to prepare driver education instructors; knowledge and skills needed to implement classroom instruction, classroom management, and appropriate student evaluation. Prerequisites: EDU 550.

EDU 552 Driver Education III: Developing Vehicle Operational Skills 3(2-1)
Third of four courses to prepare prospective driver education instructors to conduct instruction which develops vehicle operational skills for the novice driver. Prerequisites: EDU 551.

EDU 553 Driver Education IV: Practicum 3(1-2)
Fourth of four courses preparing driver education instructors; classroom and in-car instruction in approved driver education programs under mentoring of cooperating driver education teachers. Prerequisites: EDU 552.

EDU 606 Independent Study in Elementary Education 1-6(Spec)
Research or project. Prerequisites: 15 semester hours of professional education and approval of unit coordinator.

EDU 690 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. Identical to SPE 510. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: EDU 590.

EDU 695 Telecommunication in Education 3(2-2)
The study and laboratory exploration of telecommunication as used in schools and classrooms: e-mail, educational and general networks, collaborative lessons. This course is approved for offering in a distance learning format. Prerequisites: EDU 590.

EDU 699 History and Trends in Elementary School Curriculum Development 3(3-0)
History and trends in elementary school curriculum development. This course is approved for offering in a distance learning format.

EDU 602 Strategies and Techniques for Teaching 3(3-0)
Examination, development, assessment, and practical usage of methods and materials in the teacher's subject area at middle school, high school, or community college level. This course is approved for offering in a distance learning format.

EDU 603 Elementary Diagnosis, Remediation and Differentiation of Reading Instruction 3(3-0)
Identifying reading and writing difficulties for diverse learners and implementing research-based intervention practices designed to improve literacy in the elementary classroom. This course may be offered in an online or hybrid format.

EDU 605 History and Trends in Elementary School Curriculum Development 3(3-0)
Continuation of EDU 602. Students will study, practice, and apply how to appropriately and effectively implement multimedia technologies in classroom environments. Prerequisites: EDU 590. This course is approved for offering in a distance learning format.

EDU 595 Telecommunication in Education 3(2-2)
The study and laboratory exploration of telecommunication as used in schools and classrooms: e-mail, educational and general networks, collaborative lessons. This course is approved for offering in a distance learning format. Prerequisites: EDU 590.

EDU 690 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. Identical to SPE 510. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: EDU 590.

EDU 695 Telecommunication in Education 3(2-2)
The study and laboratory exploration of telecommunication as used in schools and classrooms: e-mail, educational and general networks, collaborative lessons. This course is approved for offering in a distance learning format. Prerequisites: EDU 590.

EDU 602 Strategies and Techniques for Teaching 3(3-0)
Examination, development, assessment, and practical usage of methods and materials in the teacher's subject area at middle school, high school, or community college level. This course is approved for offering in a distance learning format.

EDU 603 Elementary Diagnosis, Remediation and Differentiation of Reading Instruction 3(3-0)
Identifying reading and writing difficulties for diverse learners and implementing research-based intervention practices designed to improve literacy in the elementary classroom. This course may be offered in an online or hybrid format.

EDU 608 Projects in Education 1-6(Spec)
Investigating, analyzing, and reporting on special problems, innovative programs, changing curricula, and new techniques in elementary education. Subject to credit limitations.

EDU 609 History of Education 3(3-0)
Development of modern education in Western civilization.

EDU 613 Current Educational Issues 3(3-0)
Identification and analysis of significant, persistent issues in education in the United States and their impact on student achievement and teacher effectiveness. Identical to MLE 613. Credit may not be earned in more than one of these courses. This course has been approved for offering in a distance learning format.

EDU 614 Advanced Educational Psychology 3(3-0)
Theories of learning and application to instruction. This course may be offered in an online or hybrid format. Prerequisites: EDU 493.

EDU 615 Survey of Science Education 3(3-0)
Exploration of current issues in science teaching and learning; foundational science education literature; projects based on classroom practice; relevant science education resources. Prerequisites: Admission to the Master of Arts in Teaching, Integrated Science.

EDU 618 The Nature of Science in Science Teaching 3(3-0)
The philosophy, history, and sociology of science; the methods and goals of science education; implications for teaching the nature of science. Prerequisites: EDU 615.

EDU 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

EDU 620 Problems of Teaching Mathematics in the Elementary School 3(3-0)
Exploring cognitive issues, history, research, problem-solving, technology, innovative programs, basic skills, and state and national standards in mathematics education. Prerequisite: Teaching Certificate.

EDU 622 Advanced Adolescent Psychology 3(3-0)
Advanced analysis of growth, development, and behavior during adolescence.

EDU 628 Secondary School Programs and Practices 3(3-0)
Organization, content and philosophies underlying the establishment and operation of secondary schools. This course is approved for offering in a distance learning format.

EDU 630 Organization and Implementation of School Literacy Programs 3(3-0)
Design, implementation and evaluation of school reading and writing programs, staff development, and the change process. This course may be offered in an online or hybrid format. Prerequisites: EDU 632 or EDU 636.

EDU 632 Practicum in the Diagnosis and Treatment of Difficulties in Literacy 6(Spec)
Diagnostic procedures and materials; supervised work with K-12 students or adolescents; development and implementation of remediation procedures. Prerequisites: teaching certificate, one year teaching experience.

EDU 633 Clinical Practice in Reading 3(1-4)
Continuation of EDU 632. Prerequisites: EDU 533 and EDU 632 plus permission of instructor.

EDU 635 Problems in Language Arts in the Elementary School 3(3-0)
Trends in writing, spelling, listening, and speaking; research and activities for children. Prerequisite: EDU 330.

EDU 636 Classroom Reading and Writing Instruction 3(3-0)
Students examine the reading and writing process in classroom instruction and learn about techniques and materials appropriate for specific reading and writing approaches. This course may be offered in an online or hybrid format. Prerequisites: Admission to graduate degree program in education.

EDU 640 History and Trends in Elementary Social Studies Education 3(3-0)
Analysis of history and trends in elementary social studies education. This course is approved for offering in a distance learning format.

EDU 641 Interdisciplinary Processes and Strategies for Teaching Literacy 3(3-0)
This course will reinforce content teaching strategies and provide a conceptual framework for integrating reading, writing, and thinking for learning throughout the curriculum. Prerequisite: Elementary Teaching Certificate.

EDU 642 Instructional Multimedia 3(3-0)
Students will study, practice, and apply how to appropriately and effectively implement multimedia technologies in classroom environments. Prerequisites: EDU 590. This course is approved for offering in a distance learning format.

EDU 643 Instructional Design 3(3-0)
A study of the principles of instructional design. Designing instructional systems, processes in learning and instruction, delivery systems and evaluating instruction are considered. Prerequisites: EDU 590. This course is approved for offering in a distance learning format.

EDU 645 Advanced Science Teaching Methods 3(3-0)
Planning, assessment, and evaluation of K-12 science teaching and learning; evaluation of science curriculum materials; exploration of effective science teaching practices. Prerequisites: EDU 615.

EDU 651 Supervision of Student and Intern Teaching 3(3-0)
Development of knowledge and skills needed for supervising and mentoring in school settings. This course is approved for offering in a distance learning format. Prerequisite: two years of teaching experience.

EDU 653 The Read/Write Web 3(3-1)
Development of Read/Write Web resources with PK-12 students in a classroom setting. This course is approved for offering in a distance learning format. Prerequisites: EDU 590, EDU 642, and EDU 643.

EDU 655 The Community College 3(3-0)
History, philosophy, programs, and practices of community and junior colleges. This course is approved for offering in a distance learning format.

EDU 658 Practicum in the Community College 3(6(Spec)
Opportunity to observe/teach, or work in library, counseling center or with community college administrators. Arrangements are made at beginning of semester prior to course registration. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: EDU 655 or current employment at a community college.

EDU 660 Methods of Educational Research 3(3-0)
Interpreting research findings, planning and conducting scientific studies in education. This course may be offered in an online or hybrid format.

EDU 662 Applied Educational Measurement and Evaluation 3(3-0)
Applications of measurement and evaluation principles to educational settings with emphasis on construction and use of achievement tests. This course is approved for offering in a distance learning format. Prerequisite: admission to a graduate degree program in education.

EDU 670 Reading in the Secondary School II 3(Spec)
Materials and techniques of instruction employed by secondary school teachers and supervisors of reading. Prerequisites: EDU 330 and EDU 431, or EDU 450.

EDU 682 Psychology of Child Development 3(3-0)
Facts and generalizations concerning the growth of children from birth to maturity. Identical to PSY 682. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

EDU 687 Independent Study 1-3(Spec)
Prerequisites: 15 hours of graduate work and permission of department chairperson. Subject to credit limitation.

EDU 688 Independent Study 1-3(Spec)
Prerequisites: 15 hours of graduate work and permission of department chairperson. Subject to credit limitation.
EDU 689 Independent Study 1-3(Spec)
Prerequisites: 15 hours of graduate work and permission of department chairperson. Subject to credit limitation.

EDU 698 Thesis 1-6(Spec)
For M.A. students on Plan A. CR/NC only. Prerequisite: EDU 560.

EDU 705 Theory and Practice in Curriculum Development 3(3-0)
Fundamentals of curriculum planning, development, implementation, and evaluation. This course is approved for offering in a distance learning format.

EDU 706 Theory and Practice of Instruction 3(3-0)
Review, analyze, and apply theory and practice of instruction with a special emphasis on implementation strategies and tools for evaluating instruction. This course is approved for offering in a distance learning format.

EDU 707 Seminar: Issues in Educational Technology 3(3-0)
Study of selected issues relative to the use of new learning technologies in the classroom. Emphasis upon the learning theory which supports applied technologies. Prerequisite: EDU 590. This course is approved for offering in a distance learning format.

EDU 708 Distance Education 3(3-0)
Students completing this course will be equipped to use distance learning technologies to teach in instructional settings. This course is approved for offering in a distance learning format. Prerequisite: EDU 590.

EDU 709 Innovative Uses of Technology 3(3-0)
A survey course of new and innovative applications of technology in educational settings. Students study and develop innovative instructional models utilizing technology. This course is approved for offering in a distance learning format. Prerequisites: EDU 590.

EDU 710 Seminar: Terminal Project 3(3-0)
This course requires the Master's candidate to complete a terminal project related to the applications of technology in classroom settings. This course may be offered in an online or hybrid format. Prerequisites: students must have completed 30 hours on the M.A. in Educational Technology. Courses taken concurrently count toward the 30 hours.

EDU 730 Seminar: Issues in Literacy 3(3-0)
Examination of current issues in literacy instruction. Students complete research projects appropriate to their degree programs with oral and written presentations of research findings. This course may be offered in an online or hybrid format.

EDU 755 Advanced Research Design and Interpretation 3(3-0)
Analysis of research designs, development of measurement devices, and interpretation of advanced statistical techniques. Prerequisite: EDU 660.

EDU 765 Seminar in Curriculum Problems 3(3-0)
A survey of major issues and problems in curriculum development. This course will provide experience in developing curriculum for a specific content area. This course may be offered in an online or hybrid format. Prerequisite: a teaching certificate or admission to graduate school or teacher education.

EDU 776 Seminar: Issues in Education 3(3-0)
Capstone experience for the M.A. in Education program. Students conduct and report on a research project. This class may be offered as a hybrid format. Prerequisites: EDU 560; Successful completion of 21 hours of coursework in the MA in Education program.

EDU 780 Master of Arts Capstone Experience 3(3-0)
Students complete research projects appropriate to their degree programs that produce results applicable to their current practice. Should be last course taken in student’s program. Identical to MLE 780. Credit may not be earned in more than one of these courses.

EDU 800 Educational Technology Research 3(3-0)
Introductory course for the Doctorate in Educational Technology. Students learn how to critique educational research while being introduced to its various design philosophies and methodologies. This course may be offered in an online or hybrid format.

EDU 801 Qualitative Research in Educational Technology 3(3-0)
Applications, evaluation and analysis of qualitative research concepts in writing a dissertation, and in various aspects of professional practice in educational technology terminal-degree careers. This course may be offered in an online or hybrid format. Prerequisite: EDU 800.

EDU 802 Quantitative Research in Educational Technology 3(3-0)
Quantitative research methodology is a key component of the knowledge and skills to be developed by candidates to study educational technology and its applications. This course may be offered in an online or hybrid format. Prerequisite: EDU 800.

EDU 807 Seminar: Learning Tools in Education Technology 3(3-0)
Study of selected issues relative to the use of new learning technologies in the classroom. Emphasis upon the learning theory which supports applied technologies. This course may be offered in an online or hybrid format. Prerequisite: EDU 580.

EDU 808 Blended and Online Learning 3(3-0)
Study of selected issues relative to the use of new learning technologies in the classroom. Emphasis upon the learning theory which supports applied technologies. This course may be offered in online or hybrid format. Prerequisite: EDU 800.

EDU 810 Grant Writing 3(3-0)
This cognate course focuses on grant writing skills for funding educational technology initiatives. Topics include concept development, budgeting, assessment planning, proposal submission, and reviewer practices. This course may be offered in an online or hybrid format. Prerequisite: EDU 800.

EDU 811 Motivation in Online and Blended Learning 3(3-0)
Development and implementation of instructional strategies promoting student motivation and learning in online and blended learning environments. This course may be offered in an online or hybrid format. Prerequisite: EDU 800.

EDU 814 Differentiated Instruction in Online Learning 3(3-0)
Students examine the role of differentiated instruction in online/blended environments and address current efforts to meet the needs of all learners in technology-based environments. This course may be offered in an online or hybrid format. Prerequisite: EDU 800.

EDU 842 Mobile Learning 3(3-0)
Students will explore the potential mobile devices hold for learning and instruction and examine the impact of mobile learning from a national and international perspective. This course may be offered in an online or hybrid format. Prerequisite: EDU 800.

EDU 853 Evolving Internet Learning 3(3-0)
Application and implementation of evolving digital resources in educational settings. This course may be offered in an online or hybrid format. Prerequisite: EDU 800.

EDU 862 Data Driven Decision Making 3(3-0)
Learn to theoretically and methodologically understand the use of data and how it is used to guide practice. Techniques and statistical models used to analyze data. This course may be offered in an online or hybrid format. Prerequisite: EDU 800.

EDU 870 Higher Order Learning and New Literacies 3(3-0)
Students learn how new literacies, the skills and strategies needed to teach and learn successfully in a Web-mediated world, can promote higher order thinking. This course may be offered in an online or hybrid format. Prerequisite: EDU 800. Recommended: EDU 801, 802.

EDU 898 Dissertation 1-18(Spec)
Design and completion of the dissertation phase including data collection, data analysis, written report(s), journal submission and oral defense. CR/NC only. This course may be offered in an online or hybrid format. Prerequisites: Admission to the Doctor of Educational Technology program, successful completion of the Doctor of Educational Technology Program Comprehensive Examination.

Course Descriptions: MLE
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.

MLE 613 Current Educational Issues 3(3-0)
Identification and analysis of significant, persistent issues in education in the United States and the relationship to student achievement and teacher effectiveness. Identical to EDU 613. Credit may not be earned in more than one of these courses. This course has been approved for offering in a distance learning format. Prerequisite: EDU 600.

MLE 641 Young Adolescent Needs and Characteristics 3(3-0)
An orientation to the unique developmental needs and characteristics of young adolescents.

MLE 642 Concepts, Structures, and Programs for Middle Level Schools 3(3-0)
An orientation to middle level education which focuses on the middle level school concept, structures, and programs. Prerequisite or Co-requisite: MLE 641.

MLE 643 Student Diversity Issues in the Middle Level Classroom 3(3-0)
An orientation to the multiple aspects of human diversity in the middle level classroom. Prerequisite or Co-requisite: MLE 641.

MLE 644 Issues in Meeting the Diverse Needs of Middle Level Learners 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. Prerequisites: MLE 641, 642, 643.

MLE 645 Middle Level School Curriculum 3(3-0)
Curriculum for middle level classroom teachers to meet the unique developmental needs and characteristics of young adolescents. Prerequisites: MLE 641, MLE 642, and MLE 643.

MLE 646 Middle Level Field Experience 3(3-0)
Students develop and implement action plans for their classrooms in the field-based culminating activity of their Michigan Middle Level Endorsement. Prerequisites: MLE 644, 645.

MLE 687 Independent Study in Middle Level Education 1-6(Spec)
An opportunity for students to undertake specialized study in middle level education. Prerequisites: approval of Program Advisor and Department Chairperson.

MLE 780 Master of Arts Capstone Experience 3(3-0)
Students complete research projects appropriate to their degree programs that produce results applicable to their current practice. Should be last course taken in student’s program. Identical to EDU 780. Credit may not be earned in more than one of these courses.
This section describes programs that are interdepartmental or interdisciplinary. Please contact the director listed in each program for more information.

**Interdisciplinary Graduate Programs**

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 and emphasize 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
- Learn about creative solutions to some of today’s most challenging problems
- Become an interdisciplinary thinker who analytically and creatively embraces new 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

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**Master of Arts (M.A.) in Education**

*College of Education and Human Services*

**Global Campus, 802 Industrial Drive, Mount Pleasant 48859; 989-774-3144**

*Note:* Currently the M.A. degree in Education is only offered through Global Campus.

**Minimum Totals for Graduation: 30-34 hours**

The Master of Arts degree in Education is designed to provide knowledge and skills for individuals required to function effectively in various positions of educational leadership. This is not a certification program for public school teachers, as it presumes the individual is already trained and qualified in the technical aspects of her or his field.

The MA degree in Education program requires the student to complete a core of 18 semester hours, which includes an integrating experience (Capstone Project). An additional 12-15 semester hours must then be completed with specific courses determined by the academic advisor. All candidates for the MA must complete a minimum of 30-34 semester hours.

For information: Global Campus, 802 Industrial Drive, Mt. Pleasant, MI 48859; 989-774-3144.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

<table>
<thead>
<tr>
<th>ADMISSION REQUIREMENT SNAPSHOT</th>
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<tbody>
<tr>
<td>GPA: 2.7</td>
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<tr>
<td>Entrance Exam: N/A</td>
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<tr>
<td>See Admission Requirement Details Below</td>
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**Admission**

Applicants holding a baccalaureate or equivalent degree from a college or university of recognized standing may be granted regular admission, provided they have an overall cumulative undergraduate grade point average of 2.7 or higher (on a 4.0 scale). Conditional admission may be granted when the applicant does not meet the requirements for regular admission and evidence exists to support the applicant’s potential for success in the program. Admission decisions are governed by the policies of the Office of Research and Graduate Studies.

*Note:* For the Integrated Science concentration, applicants must have completed an undergraduate degree with at least 20 semester hours of undergraduate science, including biology, chemistry, geology (or the equivalent) and possess a current teaching certificate with a science endorsement. An applicant who does not meet the foregoing requirements may be granted Conditional Admission with the understanding that additional coursework may be required. Please note: the total number of credit hours for the MA in Education: Integrated Science is 34 hours.

**Program Requirements**

To qualify for graduation, candidates for the Master of Arts (MA) degree in Education must meet all of the following requirements found in the Graduate Degree Requirements and the following requirements:

1. Earned a minimum of 30-34 semester hours of acceptable graduate credit (12-16 semester hours of which must be in the area of concentration/emphasis).
2. Earned a minimum of 18 semester hours from Central Michigan University.
3. Submitted evidence of scholarship by meeting the Plan B paper requirements.

**Degree Requirements**

**Program Core I (18 hours)**

- EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
- EDU 614 - Advanced Educational Psychology 3(3-0)
- EDU 660 - Methods of Educational Research 3(3-0)
- EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)
- EDU 705 - Theory and Practice in Curriculum Development 3(3-0)
- EDU 776 - Seminar: Issues in Education 3(3-0)
Note: EDU 776 Seminar: Issues in Education - Following accepted guidelines toward the end of their degree program, students are required to research, analyze and provide a plan of action relevant to a problem or opportunity within their own organization or professional field.

Concentrations
Select one of the following:

Community College Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in positions of leadership or teaching in a community college environment. This is not a certification program for teachers or administrators but may be utilized for professional advancement or as a base for a doctoral program in Community College Education.

Required Courses (15 hours)
Select from the following:
- EDU 676 - Administration of Community Colleges 3(3-0)
- EDU 680 - Teaching in Higher Education Settings 3(3-0)
- EDU 757 - Student Development Theory 3(3-0)
- EDU 778 - Contemporary Issues in Higher Education 3(3-0)
- EDU 655 - The Community College 3(3-0)
Total: 33 semester hours

Curriculum and Instruction Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in positions of leadership or teaching in a school setting. EDU 776 is a capstone course in which participants conduct field or action-oriented research which is then reported in the form of a Plan B paper or project.

Note: This MA will not qualify the graduate for endorsement as a School Counselor.

Required Courses (12 hours)
- CED 608 - Understanding and Working with Couples and Families 3(3-0)
- CED 612 - Work and Career in a Global Society 3(3-0)
- CED 621 - Orientation to a Culturally Diverse Society 3(3-0)
- CED 684 - Grief, Loss and Trauma 3(3-0)
Total: 30 semester hours

Integrated Science Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in positions of leadership or teaching in a school setting. Specifically, it is designed to enhance the knowledge and skills of scientists educators. This is not a certification program for teachers or administrators but may be utilized for professional advancement.

Required Courses (16 hours)
- BIO 670 - Concepts in Biological Areas for Educators 3(2-2)
- CHM 509 - Environmental Chemistry for Science Teachers 4(3-3)
- CED 626 - Grief, Loss and Trauma 3(3-0)
- CED 615 - Survey of Science Education 3(3-0)
- CED 645 - Advanced Science Teaching Methods 3(3-0)
- CED 650 - Geology for Science Teachers 3(2-2)
Total: 34 semester hours

Training and Development Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in positions of leadership or teaching in the adult education environment. This is not a certification program for teachers or administrators but may be utilized for professional advancement.

Required Courses (12 hours)
- EDL 602 - Strategies and Techniques for Teaching 3(3-0)
- EDL 612 - Administration Within Diverse Populations 3(3-0)
- EDL 620 - Planning for Instruction in Nontraditional Settings 3(3-0)
- EDL 624 - Administration Within Diverse Populations 3(3-0)
- EDL 626 - The Adult Learner 3(3-0)
Total: 30 semester hours

Guidance and Development Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in schools, businesses or in the nonprofit sector with special emphasis on managing relationships, making appropriate referrals and recognizing special needs of students, clients or co-workers. It is not a certification program for teachers, counselors or administrators as it presumes the participants are already certified and qualified in the technical aspects of their respective positions. It is designed for educators or practitioners who do not desire to be fully certified counselors but are seeking counseling skills to enhance their teaching competencies.

This non-certification program is designed to improve practitioners’ skills in communicating with their students, colleagues, clients, and supervisors. The classes in this program focus directly on involving participants in skill-building and integration activities.

Participants regularly test skills and ideas from courses taught at their work sites and refine the use of these skills through feedback from the instructor, supervisors, and other program participants. Many of the classes require that participants interact with their students, colleagues, clients, or supervisors outside of the university setting. EDU 776 is a capstone course in which participants conduct field or action-oriented research which is then reported in the form of a Plan B paper or project.
Master of Science in Administration (M.S.A.)
Office of Research and Graduate Studies

Patricia Chase, Ed.D., Director
222 Rowe Hall; 989-774-6525

Minimum Totals for Graduation: 36 hours
The Master of Science in Administration degree is an interdisciplinary program developed to meet the educational needs and interests of administrators in organizations. The primary focus of the degree program is applied action grounded in theory. The principal elements of this degree are knowledge, competencies, and practical processes needed for successful careers in administration.

The program includes a core of courses that provides the students with a base of common knowledge and competencies required for successful administration. In addition, the program provides a concentration of specialized courses in the student’s area of professional interest. The program culminates in an integrative applied project that links the concepts of the program to the world of work and demonstrates the unity and coherence of the student’s course of study. Specific courses will be selected by an academic advisor in consultation with the student.

This program leads to an MSA degree and is identical whether on-campus or through Global Campus. Credit for course work in either program is interchangeable.

Admission Requirements, Retention & Termination Standards
For On-Campus Students

Admission
To be admitted to the Master of Science in Administration program, a candidate must meet the requirements for regular admission to Graduate Studies at CMU (a baccalaureate degree from a college or university of recognized standing with a cumulative GPA of at least 2.7 or, optionally, 3.0 in the final sixty semester hours of graded coursework toward the bachelor’s degree). At least sixty semester hours of undergraduate coursework must be graded. Applicants who possess an undergraduate GPA less than 2.7 may be considered for conditional admission. A maximum of six hours taken before admission to the MSA program may be counted toward the degree.

Competencies Required
Several MSA administrative core courses and cognate courses have prerequisites. These prerequisite courses are Accounting 201 or 203 and Statistics 282 or their equivalents. Students can satisfy the prerequisites for MSA 600, MSA 602, MSA 634, MSA 635, and MSA 640 in the following ways:

1. Successful completion of the course (grade of C or better) or its equivalent within three years prior to admission to the MSA program;
2. Pass a competency assessment exam. Examinations may be taken twice and must be passed with at least 70% accuracy. Students are limited to two attempts; or
3. Take the course or its equivalent at CMU or another accredited institution and earn a “C” or better. Submit an official transcript if the course is not taken at CMU or
4. Take either the CLEP Financial Accounting test and submit official results of 50 or better or take the DSST Principles of Financial Accounting exam and submit official results of 47 or better. Take the DSST Principles of Statistics exam and submit official results of 48 or better or 400 or better on the revised version.

Satisfactory Progress
Students must maintain a cumulative GPA of 3.0 or higher to remain in good standing. If a student’s cumulative GPA falls below 3.0, the student will be placed on academic probation. Students on probation will be allowed an opportunity to raise the cumulative GPA to a 3.0 according to Graduate Studies policy. Students dismissed from the program may petition for re-admission no sooner than one academic year after the semester they were dismissed. Coursework which is over seven years old may not be used toward the MSA degree and certificates.

English Language Requirements for International Students
Applicants with TOEFL scores of 213 CBT, 550 PBT or 79 iBT and above or IELTS scores of 6.5 and above may be granted Regular admission to the MSA Program. Students with TOEFL scores between 500 and 549 PBT or between 173 and 210 CBT or 61-78 iBT or IELTS scores of 5.5 or 6 should review the International Student Admission section on TOEFL scores in this Bulletin. Applicants who have satisfactorily completed a 4-year baccalaureate degree entirely in the United States qualify for English Proficiency. All students from non-exempt countries lacking proof of English Proficiency must be assessed by CMU’s English Language Institute. All exceptions must be approved by the MSA Director’s office.

Online Courses and MSA International Students
International students on student visas must obtain departmental approval in order to take online courses.

Advising
Upon admission to the MSA program, the student will be assigned an advisor. The student is required to meet with his or her advisor to determine prerequisite(s) and core area requirements and to select the courses to meet the concentration’s requirements. A record of the program authorization will be placed in the student’s file in the Office of Research and Graduate Studies. Any course taken without the express written consent of the MSA Director may not be approved for fulfillment of the degree requirements. When appropriate, other courses may be substituted in a concentration with the approval of the MSA Director. Students are strongly encouraged to complete their accounting and statistic competency requirements within their first 12 semester credits. Students are also strongly encouraged to take MSA 600 before the mid-point of their program.

Graduate Transfer Credit
The MSA Program will consider graduate transfer credit for courses taken by correspondence. Courses must either be recommended by ACE for graduate credit or graduate level courses taken at a regionally accredited institution. Credit will be based on applicability of the courses to the student’s concentration and the MSA Program. Students should also review the Graduate Transfer Credit policy found in this bulletin for additional requirements.

Program Requirements
All Master of Science in Administration degree students are required to take six core courses: MSA 600, MSA 601, MSA 602, MSA 603, MSA 604, and MSA 699.

To qualify for graduation, candidates for the Master of Science in Administration degree or Graduate Certificates must meet all of the requirements found in the Academic Information “Degree Requirements” section of the Graduate Bulletin and the following requirements (https://bulletins.cmich.edu/2012/gr/administrative/academic/degree-candidacy.asp?yr=2012&level=GR&loc=onc) for the Graduate Bulletin or https://bulletins.cmich.edu/2012/cel/academic/graduation.asp?yr=2012&level=GR&loc=cel for Global Campus:

1. Earned a minimum of 36 semester hours of acceptable graduate credit (15–18 semester hours of which must be in the area of concentration).
2. Earned a minimum of 18 semester hours from Central Michigan University.
3. Submitted evidence of scholarship by meeting the Plan B paper requirement by completing the integrating experience (MSA 699). This includes all Institutional Review Board (IRB) or research review application requirements. (MSA 699 replaced MSA 685 as of the 10-11 Bulletin.)
4. Successfully completed these required courses: MSA 600, MSA 601, MSA 602, MSA 603, MSA 604, and MSA 699.

Successful completion of the course is not a prerequisite for the Plan B paper requirement.
5. Applied no more than 15 semester hours of College of Business Administration courses on the program plan. College of Business Administration courses are:
   a. Courses carrying designators ACC, BIS, BLR, FIN, HSA, MGT and MKT.
   b. MSA 601, MSA 602 OR MSA 634 or MSA 635, and MSA 660.
   c. Prior learning assessment credits identified as having business school content (applies to Global Campus only).
   d. Courses transferred from a school of business or management which would be considered College of Business Administration courses at CMU.
   e. MSA Program are s

6. Have an approved program plan on file.

7. Completed all requirements for the degree within seven years of the awarding of the master’s degree.

In addition:
   a. MSA Certificate programs may not use more than 12 credits in College of Business Administration courses;
   b. MSA Certificate programs must be completed within seven years prior to the awarding of the graduate certificate;
   c. Business courses taken on any certificate program will not apply to any business degree at CMU; and
   d. Courses with MSA designators may not be used toward an MBA degree at CMU and CMU courses with MBA designators may not be used toward the MSA degree.

**Accelerated Master of Science in Administration**

*Currently enrolled CMU Undergraduate students only*

Undergraduate students majoring in Integrated Leadership Studies can pursue a Master of Science in Administration degree in any selected concentration, while fulfilling the final year requirements for their Bachelor's degree. The Accelerated Master of Science in Administration program allows students to reduce the total number of credits to complete their undergraduate degree and graduate level degrees by applying up to 12 credits toward the graduation requirements on both degree programs.

**Admission Criteria**

To be eligible for the Accelerated Master of Science in Administration program, the student must have:

A. An overall cumulative undergraduate grade point average (GPA) of at least 3.0 including all General Education requirements (including transfer and AP credits), the semester that they apply for admission to the Accelerated MSA program. This includes all forms of credit to include transfer credit from another institution.

B. CMU undergraduate grade point average (GPA) of at least 3.0 the semester that they apply for admission to the Accelerated MSA program.

C. Minimum of 86 credit hours toward a Bachelor's degree with no less than 18 remaining credit hours to complete the undergraduate degree.

During the final academic year, students will complete 12 credits of MSA coursework that will be the final courses taken and counted toward both the undergraduate and graduate degrees. The student must earn a minimum of a 3.0 GPA or higher in each course below. If the student doesn’t earn a 3.0 GPA or higher in each course that is intended to be applied to the graduate degree, the student will be dematriculated from the AMDP. The student may apply for regular admission to the MSA program. The following courses are used for dual counting for the Bachelor’s degree and the Accelerated MSA Program:

**First Semester**

- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 604 – Administration, Globalization and Multiculturalism 3(3-0)

**Second Semester**

- MSA 600 – Foundations of Research Methods in Administration 3(3-0)
- MSA 603 – Strategic Planning for the Administrator 3(3-0)

**Note:** Early undergraduate advising required. STA 282 is required for enrollment in MSA 600. Other undergraduate courses may be recommended by advisor.

*Any student appeal for concurrent admission into the Accelerated MSA Program are submitted and reviewed by the MSA department.

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**Degree Requirements**

**Concentrations**

*Note:* Some concentrations are not available at the main campus location.

Select one of the following:

**Acquisitions Administration**

The Acquisitions Administration concentration prepares administrators with a focus on acquisitions by providing a knowledge base in purchasing, regulatory concepts and related factors in acquisitions administration. Students will select 15-18 credits in consultation with their advisor.

**Required Core (18 hours)**

- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

**Required Courses (6 hours)**

- MGT 533 - Purchasing Strategy 3(3-0)
- MSA 611 - Contract Administration 3(3-0)

**Electives (9-12 hours)**

Select three or four of the following:

- IET 500 - Production Concepts 3(3-0)
- IET 527 - Industrial Safety Management 3(3-0)
- MGT 542 - Inventory and Materials Management 3(3-0)
- MGT 543 - Management and Control of Quality 3(3-0)
- MSA 504 - Strategies and Proposals in Government Acquisitions 3(3-0)
- MSA 540 - Legal Considerations of Contract Administration 3(3-0)
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
- PSC 712 - Implementation and Reform of Public Programs 3(3-0)
- PSC 714 - Program Analysis and Evaluation 3(3-0)

**Cognate Courses (0-3 hours)**

Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:

- MSA 501 - Managing Change with Emotional Intelligence 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 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(3-0)

*Note:* MSA 681 and MSA 690 are only available to students admitted to Central Michigan University’s Mount Pleasant campus.

**Total:** 36 semester hours

**Engineering Management**

The purpose of the concentration is to provide a program of study for the students who intend to pursue a career in this field or for engineers who have the need to acquire managerial skills. Students will gain the knowledge needed to manage industrial, engineering, high tech and "green" energy organizations. The concentration combines the analysis and integration of theory, principles, and research in technology, industrial and engineering management with administrative science.

**Required Core (18 hours)**

- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

(Continued)
Required Courses (18 hours)
- IET 500 - Production Concepts 3(3-0)
- IET 501 - Application of Industrial Management Principles 3(3-0)
- IET 524 - Technology and Environment 3(3-0)
- 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)

Total: 36 semester hours

General Administration

Statement of Purpose for the Concentration
The General Administration concentration is designed to serve the needs of a very heterogeneous group of students. The intent is to offer a program of study which avoids duplication of previous course work, training, or experience by allowing additional study in areas of choice.

Required Core (18 hours)
- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

General Administration Concentration Areas (15-18 hours)

Guide to Choosing Courses
Students are encouraged to complete courses listed within a broad range of categories. Students may substitute up to six (6) credits of courses on this concentration providing the courses are consistent with one or more of the categories listed below. The use of the substitutes must be recommended by the advisor and approved by the MSA Director.

Concentration Courses I
Information Systems and Analysis
- The integration of computer and production systems into administrative decision making.
- BIS 601 - Management Information Systems 3(3-0)
- CPS 603 - Computer Information Systems 3(3-0)
- IET 500 - Production Concepts 3(3-0)
- MKT 555 - Market and Sales Forecasting 3(3-0)
- MSA 640 - Quantitative Applications in Decision Making 3(3-0)

Concentration Courses II
International Systems, Issues, and Problems
- The study of systems, issues, and problems that impact upon dynamic organizations operating within a global environment.
- COM 667 - Seminar in Intercultural Communication 3(3-0)
- FIN 573 - International Finance 3(3-0)
- MGT 667 - International Business 3(3-0)
- MKT 560 - International Marketing 3(3-0)
- MSA 510 - Global Leadership Perspectives 3(3-0)
- PSC 555 - International Law 1 3(3-0)

Concentration Courses III
Legal and Political Systems
- The nature of legal and political systems and how they impact the operation of organizations and individual decision making.
- ECO 515 - Collective Bargaining and Labor Law 3(3-0)
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

Concentration Courses IV
Organizational Behavior/Human Resources Administration
- The study of individuals within the work organization and the systems and processes that affect their behavior.
- CED 555 - Human Relations Skills 3(3-1)
- COM 665 - Seminar in Communication and Negotiation in Employee Relations 3(3-0)
- MGT 643 - Human Resource Management 3(3-0)
- MGT 646 - Labor Relations Issues 3(3-0)
- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 502 - Workforce Improvement Strategies in Corporate/Non-profit Organizations 3(3-0)
- MSA 503 - Gender and Generational Supervision 3(3-0)
- PSC 711 - Public Personnel Administration Practice 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)
- PSY 535 - Organizational Psychology 3(3-0)

Concentration Courses V
Organizational Communications
- Improving communication of individuals and groups within and between organizations.
- COM 560 - Communication and Social/Organizational Change 3(3-0)
- COM 561 - Communication in Conflict Management 3(3-0)
- COM 667 - Seminar in Intercultural Communication 3(3-0)
- EDL 610 - Grants and Fund Procurement 3(3-0)
- JRN 670 - Public Relations Management 3(3-0)
- MKT 555 - Market and Sales Forecasting 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)

Concentration Courses VI
Social and Economic Systems
- The nature of social and economic systems and how they constrain, control, and impact the operational effectiveness of operations.
- IET 524 - Technology and Environment 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- PHL 518 - Professional Ethics 3(3-0)
- PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
- SOC 512 - Industrial Sociology 3(3-0)

Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

Cognate Courses (0-3 hours)
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
- MSA 501 - Managing Change with Emotional Intelligence 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 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(3-0)

Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

Total: 36 semester hours

Health Services Administration
The Health Services Administration concentration is designed to provide the knowledge and skills required for directors, administrators and supervisors in health services. Students will select 15-18 credits in consultation with their advisor.

Required Core (18 hours)
- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)
Course Requirements (15-18 hours)
HSC 507 - Introduction to Health Service Organizations and Systems 3(3-0)
HSC 520 - Health Services Administration 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 617 - Community and Public Health 3(3-0)
HSC 619 - Program Evaluation in the Health Fields 3(3-0)
HSC 700 - Travel Course in Health Education 1-15(Spec)
HSC 701 - Managed Care: Origins, Organizations, and Operations 3(3-0)
HSC 710 - Quality Improvement in Health Services 3(3-0)
HSC 740 - Health Planning 3(3-0)
HSC 745 - Biostatistics 3(2-1)
HSC 750 - Program Evaluation in the Health Fields 3(3-0)
HSC 790 - Program Evaluation in the Health Fields 3(3-0)
HSC 796 - Special Topics 3(3-0)
HSC 798 - Reading Courses 1-3(Spec)
HSC 799 - Reading Courses 1-3(Spec)
HSC 850 - Seminar in Organizational Development 3(3-0)
HSC 856 - Health Services Administration 3(3-0)
HSC 861 - Administrative Practicum 1-3(Spec)
HSC 869 - Special Topics 3(3-0)
HSC 900 - Thesis 0-6
HSC 970 - Doctoral Dissertation 0-20
HSC 998 - Graduate Seminar 1-4(Spec)
HSC 999 - Independent Study 1-6(Spec)

Human Resources Administration
The Human Resources Administration concentration provides a program of study for the student who is pursuing, or intends to pursue, a career in the field of Human Resources. The concentration is designed to provide students with an overall background in the field as well as in the specific areas of Labor Relations, Staffing, Training and Organization Development. Students will select 15-18 credits in consultation with their advisor.

Required Core (18 hours)
MSA 500 - Managing Change with Emotional Intelligence 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 660 - Marketing Administration 3(3-0)
MSA 681 - Administrative Practicum 1-3(Spec)
MSA 690 - Internship 1-3(Spec)
MSA 696 - Special Topics 3(3-0)

Guide to Choosing Courses:
Students are required to take one course from Category 1, preferably before taking other courses in the concentration. In order to produce the strongest preparation, it is recommended that students take one course from Categories 2 and 3 and two courses from Category 4.

Category 1 - Survey of Human Resources Administration Courses (Required)
Take one of the following, preferably before taking other courses in the concentration.
MGT 643 - Human Resource Management 3(3-0)
PSC 711 - Public Personnel Administration Practice 3(3-0)

Category 2 - Labor Relations Courses
It is recommended that students take one of the following:
COM 665 - Seminar in Communication and Negotiation in Employee Relations 3(3-0)
ECO 515 - Collective Bargaining and Labor Law 3(3-0)
MGT 646 - Labor Relations Issues 3(3-0)

Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

Category 3 - Training & Organization Development Courses
It is recommended that students take one of the following:
CED 555 - Human Relations Skills 3(3-1)
COM 560 - Communication and Social/Organizational Change 3(3-0)
COM 561 - Communication in Conflict Management 3(3-0)
MGT 649 - Seminar in Organizational Development 3(3-0)
MSA 502 - Workforce Improvement Strategies in Corporate/Non-profit Organizations 3(3-0)
MSA 503 - Gender and Generational Supervision 3(3-0)

Note: Students may not count both MGT 647 and PSY 536 on a certificate or degree program.

Cognate Courses (0-3 hours)
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
MSA 501 - Managing Change with Emotional Intelligence 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 660 - Marketing Administration 3(3-0)
MSA 681 - Administrative Practicum 1-3(Spec)
MSA 690 - Internship 1-3(Spec)
MSA 696 - Special Topics 3(3-0)

Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

Total: 36 semester hours

Information Resource Management
The Information Resource Management Concentration is designed to enable students to develop a comprehensive management approach to the introduction of information systems in an organization, in order to ensure that the information technology solution which is chosen will be deemed the one most appropriate. Students will select 15-18 credits in consultation with their advisor.

Required Core (18 hours)
MSA 600 - Foundations of Research Methods in Administration 3(3-0)
MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
MSA 602 - Financial Analysis, Planning and Control 3(3-0)
MSA 603 - Strategic Planning for the Administrator 3(3-0)
MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
MSA 699 - Applied Research Project in Administration 3(Spec)
**Required Courses I (3 hours)**
BIS 634 - Seminar in Information Systems Issues 3(3-0)

**Required Courses II (3 hours)**
Select one of the following:
BIS 601 - Management Information Systems 3(3-0)
CPS 603 - Computer Information Systems 3(3-0)

**Note:** Students may not count both CPS 603 and BIS 601 on an IRM concentration or certificate.

**Required Courses III (3 hours)**
Select one of the following:
BIS 630 - Systems Analysis and Design 3(3-0)
CPS 510 - Software Systems Engineering 3(3-0)

**Note:** Students may not count both CPS 510 and BIS 630 on an IRM concentration or certificate.

**Required Courses IV (3 hours)**
Select one of the following:
BIS 635 - Business Systems Applications 3(3-0)
CPS 612 - Software Project Management 3(3-0)

**Note:** Students may not count both CPS 612 and BIS 635 on an IRM concentration or certificate.

**Electives (3-6 hours)**
One to two specialized courses determined by the MSA Director.

**Cognate Courses (0-3 hours)**
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
MBA 501 - Managing Change with Emotional Intelligence 3(3-0)
MBA 634 - Managerial Accounting Concepts 3(3-0)
MBA 635 - Financial Management 3(3-0)
MBA 640 - Quantitative Applications in Decision Making 3(3-0)
MBA 660 - Marketing Administration 3(3-0)
MBA 681 - Administrative Practicum 1-3(Spec)
MBA 690 - Internship 1-3(Spec)
MBA 696 - Special Topics 3(3-0)

**Note:** MSA 681 and MSA 690 are only available to students admitted to Central Michigan University’s Mount Pleasant campus.

**Total:** 36 semester hours

**International Administration**
The International Administration concentration is designed to provide the appropriate educational background for students who are interested in practicing administration in international settings. Those who have administrative responsibilities with international dimensions, but work in the United States, would also find it helpful.

Students will demonstrate a sensitivity to contemporary cultural variations and the need for understanding them. This may be evidenced by graduate or undergraduate coursework, experience or other appropriate means.

**Required Core (18 hours)**
MBA 600 - Foundations of Research Methods in Administration 3(3-0)
MBA 601 - Organizational Dynamics and Human Behavior 3(3-0)
MBA 602 - Financial Analysis, Planning and Control 3(3-0)
MBA 603 - Strategic Planning for the Administrator 3(3-0)
MBA 604 - Administration, Globalization and Multiculturalism 3(3-0)
MBA 699 - Applied Research Project in Administration 3(Spec)

**Required Courses (15-18 hours)**
Select from the following:
ANT 506/SOC 506 - Comparative Cultural Systems 3(3-0)
COM 667 - Seminar in Intercultural Communication 3(3-0)
FIN 573 - International Finance 3(3-0)
MGT 667 - International Business 3(3-0)
MKT 560 - International Marketing 3(3-0)

MSA 510 - Global Leadership Perspectives
PSC 551 - Seminar in International Relations 3(3-0)
PSC 555 - International Law I 3(3-0)
PSC 642 - Problems and Processes of International Development I 3(3-0)
PSC 651 - Comparative Political & Economic Systems 3(3-0)

**Note:** When appropriate, other courses may be substituted with the approval of the MSA Director.

**Cognate Courses (0-3 hours)**
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
MBA 501 - Managing Change with Emotional Intelligence 3(3-0)
MBA 634 - Managerial Accounting Concepts 3(3-0)
MBA 635 - Financial Management 3(3-0)
MBA 640 - Quantitative Applications in Decision Making 3(3-0)
MBA 660 - Marketing Administration 3(3-0)
MBA 681 - Administrative Practicum 1-3(Spec)
MBA 690 - Internship 1-3(Spec)
MBA 696 - Special Topics 3(3-0)

**Note:** MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

**Total:** 36 semester hours

**Leadership**
The Leadership Concentration enables students to enhance their knowledge and skills in the area of leadership, group dynamics, organizational change, management of conflict, negotiation, cultural diversity and communication. Students will select 15-18 credits in consultation with their advisor.

**Required Core (18 hours)**
MBA 600 - Foundations of Research Methods in Administration 3(3-0)
MBA 601 - Organizational Dynamics and Human Behavior 3(3-0)
MBA 602 - Financial Analysis, Planning and Control 3(3-0)
MBA 603 - Strategic Planning for the Administrator 3(3-0)
MBA 604 - Administration, Globalization and Multiculturalism 3(3-0)
MBA 699 - Applied Research Project in Administration 3(Spec)

**Required Course (3 hours)**
PSC 785 - Strategic Leadership 3(3-0)

**Electives (12-15 hours)**
CED 555 - Human Relations Skills 3(3-1)
COM 560 - Communication and Social/Organizational Change 3(3-0)
COM 561 - Communication in Conflict Management 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)
ECO 515 - Collective Bargaining and Labor Law 3(3-0)
MGT 646 - Labor Relations Issues 3(3-0)
MGT 649 - Seminar in Organizational Development 3(3-0)
MBA 501 - Managing Change with Emotional Intelligence 3(3-0)
MBA 502 - Workforce Improvement Strategies in Corporate/Non-profit Organizations 3(3-0)
MBA 503 - Gender and Generational Supervision 3(3-0)
MBA 510 - Global Leadership Perspectives 3(3-0)
MBA 696 - Special Topics 3(3-0)
PSC 518 - Professional Ethics 3(3-0)
PSY 531 - Group Dynamics 3(3-0)
PSY 535 - Organizational Psychology 3(3-0)

Plus one specialized course determined by the MSA Director

**Note:** Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

**Cognate Courses (0-3 hours)**
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
MSA 600 - Foundations of Research Methods in Administration 3(3-0)
MSA 601 - Managing Change with Emotional Intelligence 3(3-0)
MSA 602 - Managerial Accounting Concepts 3(3-0)
MSA 603 - Financial Management 3(3-0)
MSA 604 - Quantitative Applications in Decision Making 3(3-0)
MSA 605 - Marketing Administration 3(3-0)
MSA 606 - Administrative Practicum 1-3(Spec)
MSA 607 - Internship 1-3(Spec)
MSA 608 - Special Topics 3(3-0)

Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

Total: 36 semester hours

Philanthropy and Fund Raising

The purpose of the concentration is to provide an appropriate educational experience for students who intend to pursue careers in the field of philanthropy and fundraising. Students will gain an understanding of the history and cultural traditions of philanthropic and fundraising organizations as well as the knowledge to manage such organizations. Decision-making skills, analysis and integration of theory and application will strengthen students' understanding of the roles, influence and impact of the discipline in the economic, political, and social arena.

Required Core (18 hours)

MSA 600 - Foundations of Research Methods in Administration 3(3-0)
MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
MSA 602 - Financial Analysis, Planning and Control 3(3-0)
MSA 603 - Strategic Planning for the Administrator 3(3-0)
MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
MSA 699 - Applied Research Project in Administration 3(Spec)

Required Courses (15 hours)

MSA 641 - Historical and Cultural Perspectives on Philanthropy 3(3-0)
MSA 642 - Principles, Theory and Ethical Practices in Fund-raising 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 3(3-0)
MSA 645 - Strategic Philanthropy: Corporations, Foundations, Individuals and 3(3-0)

Electives (3 hours)

Select one of the following:

EDL 609 - Administration of Volunteer Programs 3(3-0)
EDL 610 - Grants and Fund Procurement 3(3-0)
RPL 521 - Fund Development & Grant Writing for Public & Non-profit Organizations 3(3-0)

Total: 36 semester hours

Public Administration

The Public Administration Concentration is designed to prepare students for careers in public sector administration. Broadly, the objectives of the program are to provide students with background and competency in five areas including:

1. the political, social, and economic environment of public administration;
2. public management process;
3. public policy analysis;
4. research and analytic methods; and
5. organization theory and behavior.

Required Core (18 hours)

MSA 600 - Foundations of Research Methods in Administration 3(3-0)
MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
MSA 602 - Financial Analysis, Planning and Control 3(3-0)
MSA 603 - Strategic Planning for the Administrator 3(3-0)
MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
MSA 699 - Applied Research Project in Administration 3(Spec)

Required Courses (15-18 hours)

Select five or six from the following:

ECO 515 - Collective Bargaining and Labor Law 3(3-0)
COM 665 - Seminar in Communication and Negotiation in Employee Relations 3(3-0)
PSC 646 - Labor Relations Issues 3(3-0)
PSC 514 - American Public Policy Making 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)
PSC 610 - Foundations of Public Administration 3(3-0)
PSC 655 - Managing Modern Local Government 3(3-0)
PSC 661 - Administration and Policy in American State Government 3(3-0)
PSC 711 - Public Personnel Administration Practice 3(3-0)
PSC 713 - Public Budgeting and Finance 3(3-0)
PSC 714 - Program Analysis and Evaluation 3(3-0)
PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
PSC 775 - Organization Theory in Public Administration 3(3-0)
PSC 785 - Strategic Leadership 3(3-0)

Note: Only one of the following may be used to fulfill concentration requirements: ECO 515, COM 665, or MGT 646.

Cognate Courses (0-3 hours)

Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:

MSA 501 - Managing Change with Emotional Intelligence 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 660 - Marketing Administration 3(3-0)
MSA 681 - Administrative Practicum 1-3(Spec)
MSA 690 - Internship 1-3(Spec)
MSA 699 - Special Topics 3(3-0)

Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

Total: 36 semester hours

Recreation & Park Administration

The Recreation, Parks, and Leisure Administration concentration is designed to provide students with background and competencies in administration, grant writing, evaluation, current issues, as well as areas of individualized interest. Students will select 15-18 credits in consultation with their advisor.

Required Core (18 hours)

MSA 600 - Foundations of Research Methods in Administration 3(3-0)
MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
MSA 602 - Financial Analysis, Planning and Control 3(3-0)
MSA 603 - Strategic Planning for the Administrator 3(3-0)
MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
MSA 699 - Applied Research Project in Administration 3(Spec)

Required Courses (6 hours)

RPL 611 - Evaluation in Recreation and Leisure Services 3(3-0)
RPL 618 - Issues in Leisure 3(3-0)
RPL 619 - Internship 1-3(Spec)
RPL 620 - Special Topics 3(3-0)

Electives (9-12 hours)

Select from the following:

RPL 609 - Administration of Volunteer Programs 3(3-0)
RPL 610 - Grants and Fund Procurement 3(3-0)
RPL 611 - Grants Fiscal Administration 3(3-0)
RPL 521 - Fund Development & Grant Writing for Public & Non-profit Organizations 3(3-0)
RPL 545 - Recreation Facility Operations and Management 3(3-0)
RPL 640 - Recreation Program and Event Administration 3(3-0)

Note: Select only one of RPL 545 OR MSA 660, not both.

(Continued)
Cognate Courses (0-3 hours)
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
- MSA 501 - Managing Change with Emotional Intelligence 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 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(3-0)
Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University’s Mount Pleasant campus.
Total: 36 semester hours

Research Administration
The purpose of the concentration is to provide an appropriate educational experience to Research Administration professionals that will allow them to gain insight into the most recent developments in the field, gain practical experience, meet the growing data and informational needs and demands in their respective organizations, and to advance in the research administration profession.

Required Core (18 hours)
- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

Required Courses (12 hours)
- 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)

Electives (6 hours)
Select from the following:
- MSA 615 - Sponsored Project Administration 3(3-0)
- MSA 616 - The Practice of Research Administration 3(3-0)
- MSA 617 - Clinical Research Administration 3(3-0)
- MSA 622 - Research Facilities Administration and Cost 3(3-0)

Total: 36 semester hours

MSA Graduate Certificates
The following MSA Graduate Certificates are offered:
- Acquisitions Administration
- Engineering Management
- General Administration
- Health Services Administration
- Human Resources Administration
- Information Resources Administration
- International Administration
- Leadership
- Philanthropy and Fundraising
- Public Administration
- Research Administration

Note: Not all certificates are available at the main campus location.

Acquisitions Administration Certificate
Minimum Totals for Graduation: 15 hours

Required Courses (6 hours)
- MGT 533 - Purchasing Strategy 3(3-0)
- MSA 611 - Contract Administration 3(3-0)

Electives (9 hours)
Select from the following:
- IET 500 - Production Concepts 3(3-0)
- IET 527 - Industrial Safety Management 3(3-0)
- MGT 542 - Inventory and Materials Management 3(3-0)
- MGT 543 - Management and Control of Quality 3(3-0)
- MSA 504 - Strategies and Proposals in Government Acquisitions 3(3-0)
- MSA 540 - Legal Considerations of Contract Administration 3(3-0)
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
- PSC 712 - Implementation and Reform of Public Programs 3(3-0)
- PSC 714 - Program Analysis and Evaluation 3(3-0)

Total: 15 semester hours

Engineering Management Certificate
Minimum Totals for Graduation: 18 hours

Required Courses (18 hours)
- IET 500 - Production Concepts 3(3-0)
- IET 501 - Application of Industrial Management Principles 3(3-0)
- IET 524 - Technology and Environment 3(3-0)
- 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)

Total: 18 semester hours
General Administration Certificate

Minimum Totals for Graduation: 15 hours

- Students are encouraged to complete courses listed within a broad range of categories. If not taken as part of the core curriculum, any one (1) MSA designator course may be completed to partially fulfill the requirements of the General Administration concentration.
- Students may substitute up to six (6) credits of courses on this concentration providing the courses are consistent with one or more of the categories listed below. The use of the substitutes must be recommended by the advisor and approved by the MSA Director.

Required Courses (15-18 hours)

- BIS 601 - Information Systems 3(3-0)
- CED 555 - Human Relations Skills 3(3-1)
- COM 560 - Communication and Social/Organizational Change 3(3-0)
- COM 561 - Communication in Conflict Management 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)
- CPS 603 - Computer Information Systems 3(3-0)
- ECO 515 - Collective Bargaining and Labor Law 3(3-0)
- ELD 610 - Grants and Fund Procurement 3(3-0)
- FIN 573 - International Finance 3(3-0)
- IET 500 - Production Concepts 3(3-0)
- IET 524 - Technology and Environment 3(3-0)
- JRN 670 - Public Relations Management 3(3-0)
- MGT 643 - Human Resource Management 3(3-0)
- MGT 646 - Labor Relations Issues 3(3-0)
- MGT 667 - International Business 3(3-0)
- MKT 555 - Market and Sales Forecasting 3(3-0)
- MKT 560 - International Marketing 3(3-0)
- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 502 - Workforce Improvement Strategies in Corporate/Non-profit Organizations 3(3-0)
- MSA 503 - Gender and Generational Supervision 3(3-0)
- MSA 510 - Global Leadership Perspectives 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 660 - Marketing Administration 3(3-0)
- PHL 518 - Professional Ethics 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)
- PSC 711 - Public Personnel Administration Practice 3(3-0)
- PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)
- PSY 535 - Organizational Psychology 3(3-0)
- SOC 512 - Industrial Sociology 3(3-0)

Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

Total: 15 semester hours

Health Services Administration Certificate

Minimum Totals for Graduation: 15 hours

Required Courses (12 hours)

- HSC 507 - Introduction to Health Service Organizations and Systems 3(3-0)
- HSC 520 - Health Services Administration 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)
- HSL 631 - Healthcare Law, Compliance and Risk Management 3(3-0)
- HSL 651 - Fundamentals of Healthcare Finance 3(3-0)

Note: You may only select ONE of HSC 570 OR HSL 651 and only ONE of HSC 571 OR HSL 631.

Note: Advisors may recommend to the MSA Director the substitution of another course for HSC 520, if the student has appropriate management experience.

Elective Courses (3 hours)

Select one of the following:

- HSC 516 - Travel Course in Health Education 1-15(Spec)
- HSC 538 - 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 552 - International Health Systems, Organizations and Policy 3(3-0)
- HSC 572 - Quality Improvement in Health Services 3(3-0)
- HSC 581 - Managed Care: Origins, Organizations, and Operations 3(3-0)
- HSC 617 - Community and Public Health 3(3-0)
- HSC 700 - Program Evaluation in the Health Fields 3(3-0)

Total: 15 semester hours

Human Resources Administration Certificate

Minimum Totals for Graduation: 15 hours

Course Requirements (15 hours)

- Students are required to take one course from Category 1, preferably before taking other courses in the concentration.
- In order to produce the strongest preparation, it is recommended that students take one course from Categories 2 and 3, and two courses from Category 4.

Category 1 - Survey of Human Resources Administration (Required) (3 hours)

Take one of the following, preferably before taking other courses in the concentration.

- MGT 643 - Human Resource Management 3(3-0)
- PSC 711 - Public Personnel Administration Practice 3(3-0)

Category 2 - Labor Relations Courses

- It is recommended that students take one of the following:
  - COM 665 - Seminar in Communication and Negotiation in Employee Relations 3(3-0)
  - ECO 515 - Collective Bargaining and Labor Law 3(3-0)
  - MGT 646 - Labor Relations Issues 3(3-0)

Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

Category 3 - Training & Organization Development Courses

- It is recommended that students take one of the following:
  - CED 555 - Human Relations Skills 3(3-1)
  - COM 560 - Communication and Social/Organizational Change 3(3-0)
  - COM 561 - Communication in Conflict Management 3(3-0)
  - MGT 649 - Seminar in Organizational Development 3(3-0)
  - MSA 502 - Workforce Improvement Strategies in Corporate/Non-profit Organizations 3(3-0)
  - MSA 503 - Gender and Generational Supervision 3(3-0)

Note: Students may not count both COM 560 and COM 561 within the HRA certificate or concentration.

Category 4 - Staffing Courses

- It is recommended that students take two of the following:
  - MGT 645 - Personnel Compensation Practice and Process 3(3-0)
  - MGT 647 - Employee Selection and Evaluation 3(3-0)
  - PSY 536 - Personnel Psychology 3(3-0)
  - PSY 636 - Organizational Applications of Personnel Psychology 3(3-0)

Note: Students may not count both MGT 647 and PSY 536 on a certificate or degree program.

Total: 15 semester hours
Information Resource Management Certificate

Minimum Totals for Graduation: 15 hours

Required Courses I (3 hours)
BIS 634 - Seminar in Information Systems Issues 3(3-0)

Required Courses II (3 hours)
BIS 601 - Management Information Systems 3(3-0)
CPS 603 - Computer Information Systems 3(3-0)
Note: Students may not count both BIS 601 and CPS 603 on an IRM concentration or IRM certificate.

Required Courses III (3 hours)
BIS 630 - Systems Analysis and Design 3(3-0)
CPS 510 - Software Systems Engineering 3(3-0)
Note: Students may not count both BIS 630 and CPS 510 on an IRM concentration or IRM certificate.

Required Courses IV (3 hours)
BIS 635 - Business Systems Applications 3(3-0)
CPS 612 - Software Project Management 3(3-0)
Note: Students may not count both BIS 635 and CPS 612 on an IRM concentration or IRM certificate.

Required Courses V (3 hours)
One specialized course determined by the MSA Director.
Total: 15 semester hours

International Administration Certificate

Minimum Totals for Graduation: 15 hours

Required Courses (15 hours)
ANT 506/SOC 506 - Comparative Cultural Systems 3(3-0)
COM 667 - Seminar in Intercultural Communication 3(3-0)
FIN 573 - International Finance 3(3-0)
MGT 667 - International Business 3(3-0)
MKT 560 - International Marketing 3(3-0)
MSA 510 - Global Leadership Perspectives 3(3-0)
PSC 551 - Seminar in International Relations 3(3-0)
PSC 555 - International Law I 3(3-0)
PSC 642 - Problems and Processes of International Development 3(3-0)
PSC 651 - Comparative Political & Economic Systems 3(3-0)
Total: 15 semester hours

Leadership Certificate

Minimum Totals for Graduation: 15 hours

Required Course
PSC 785 - Strategic Leadership 3(3-0)

Electives (12 hours)
CED 555 - Human Relations Skills 3(3-1)
COM 560 - Communication and Social/Organizational Change 3(3-0)
COM 561 - Communication in Conflict Management 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)
ECO 515 - Collective Bargaining and Labor Law 3(3-0)
MGT 646 - Labor Relations Issues 3(3-0)
MGT 649 - Seminar in Organizational Development 3(3-0)
MKT 501 - Managing Change with Emotional Intelligence 3(3-0)
MSA 502 - Workforce Improvement Strategies in Corporate/Non-profit Organizations 3(3-0)
MSA 503 - Gender and Generational Supervision 3(3-0)
MSA 510 - Global Leadership Perspectives 3(3-0)
MSA 696 - Special Topics 3(3-0)
PHL 518 - Professional Ethics 3(3-0)
PSY 531 - Group Dynamics 3(3-0)
PSY 535 - Organizational Psychology 3(3-0)
Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.
Total: 15 semester hours

Philanthropy and Fundraising

Minimum Totals for Graduation: 18 hours

Required Courses (15 hours)
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 3(3-0)
MSA 645 - Strategic Philanthropy: Corporations, Foundations, Individuals and 3(3-0)

Electives (3 hours)
Select one of the following:
EDL 609 - Administration of Volunteer Programs 3(3-0)
EDL 610 - Grants and Fund Procurement 3(3-0)
MSA 612 - Grants Fiscal Administration 3(3-0)
RPL 521 - Fund Development & Grant Writing for Public & Non-profit Organizations 3(3-0)
Total: 18 semester hours

Public Administration Certificate

Minimum Totals for Graduation: 15 hours

Required Courses (15 hours)
ECO 515 - Collective Bargaining and Labor Law 3(3-0)
COM 665 - Seminar in Communication and Negotiation in Employee Relations 3(3-0)
MGT 646 - Labor Relations Issues 3(3-0)
PSC 514 - American Public Policy Making 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)
PSC 610 - Foundations of Public Administration 3(3-0)
PSC 655 - Managing Modern Local Government 3(3-0)
PSC 661 - Administration and Policy in American State Government 3(3-0)
PSC 711 - Public Personnel Administration Practice 3(3-0)
PSC 713 - Public Budgeting and Finance 3(3-0)
PSC 714 - Program Analysis and Evaluation 3(3-0)
PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
PSC 775 - Organization Theory in Public Administration 3(3-0)
PSC 785 - Strategic Leadership 3(3-0)
Note: Only one of the following may be used to fulfill certificate requirements: ECO 515, COM 665, or MGT 646.
Total: 15 semester hours
Recreation and Park Administration Certificate

Minimum Totals for Graduation: 18 hours

The Recreation, Parks, and Leisure Administration graduate certificate is designed to provide students with background and competencies in administration, grant writing, evaluation, current issues, as well as areas of individualized interest. Students will select 18 credits in consultation with their advisor.

Required Courses (6 hours)
RPL 611 - Evaluation in Recreation and Leisure Services 3(3-0)
RPL 618 - Issues in Leisure 3(3-0)

Electives (12 hours)
Select from the following:
- MSA 660 - Marketing Administration 3(3-0)
- RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)
- RPL 521 - Fund Development & Grant Writing for Public & Non-profit Organizations 3(3-0)
- RPL 545 - Marketing of Leisure Services 3(3-0)
- RPL 636 - Recreation Facility Operations and Management 3(3-0)
- RPL 640 - Recreation Program and Event Administration 3(3-0)

Note: Select only one of RPL 545 OR MSA 660, not both.

Total: 18 semester hours

Research Administration Certificate

Minimum Totals for Graduation: 18 hours

Required Courses (12 hours)
- 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)

Electives (6 hours)
Select from the following:
- MSA 615 - Sponsored Project Administration 3(3-0)
- MSA 616 - The Practice of Research Administration 3(3-0)
- MSA 617 - Clinical Research Administration 3(3-0)
- MSA 622 Research Facilities Administration and Cost 3(3-0)

Total: 18 semester hours

Course Descriptions: MSA

MSA 501 Managing Change with Emotional Intelligence 3(3-0)
An examination of organizational leadership utilizing emotional intelligence as a foundation for managing change. This course is approved for offering in a distance learning format. Prerequisites: LDR 200 and 86 semester hours completed; or graduate standing.

MSA 502 Workforce Improvement Strategies in Corporate/Non-profit Organizations 3(3-0)
Examines the process of preparing objectives, defining content, and selecting learning activities used by administrators to train, develop, and evaluate employees throughout the career continuum. This course may be offered in an online or hybrid 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 510 Global Leadership Perspectives 3(3-0)
An examination of established and emerging perspectives on global leadership. The student will focus on geo-leadership models which impact administration across borders and cultures. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and 86 semester hours completed; or Graduate Standing.
MSA 634 Managerial Accounting Concepts 3(3-0)
Study of how accounting information can be used in planning, coordinating, and controlling the activities of an organization. Prerequisite: Accounting competency. This course is approved for offering in a distance learning format.

MSA 635 Financial Management 3(3-0)
Study of financial management and financial management techniques for administrators of private and public organizations. Emphasis is on financial planning and control. Prerequisite: Accounting competency. This course is approved for offering in a distance learning format.

MSA 640 Quantitative Applications in Decision Making 3(3-0)
This course studies stochastic and quantitative analytical tools and concepts which can be used to make optimal decisions in the pursuit of such organizational goals as cost efficiency, service delivery, and profit. Concepts include probability theory, statistics, decision theory, inventory control, linear models, linear programming, network analysis, and simulation. Prerequisite: Statistics competency. This course is approved for offering in a distance learning format.

MSA 641 Historical and Cultural Perspectives on Philanthropy 3(3-0)
Explores the historical issues and values surrounding philanthropy and nonprofit organizations that shape contemporary formal study of philanthropy. Examines philanthropy across geographic and cultural perspectives. This course may be offered in an online or hybrid format.

MSA 642 Principles, Theory and Ethical Practices in Fundraising and Grant Making 3(3-0)
Focuses on principles, theory, and ethics in fundraising. Examines values, ethical issues raised in philanthropy and the role of boards of trustees. This course may be offered in an online or hybrid format.

MSA 643 Administration of Annual, Capital Campaigns and Major Gifts 3(3-0)
Focuses on the development of fundraising skills and techniques to build annual giving and major gift programs; assess capital campaign readiness; and implement capital campaigns. This course may be offered in an online or hybrid format.

MSA 644 Philanthropy: The Role of Foundations, Non Profit Organizations in Society 3(3-0)
This course covers theories of philanthropy and the role of nonprofit organizations in society to clarify the meaning of philanthropy. This course may be offered in an online or hybrid format.

MSA 645 Strategic Philanthropy: Corporations, Foundations, Individuals and Bequests 3(3-0)
Introduces the philanthropic road map, allowing donors to identify motivations, goals, strategies, grantees, and benchmarks to solve problems. Provides tools to effectively manage philanthropic programs. This course may be offered in an online or hybrid format.

MSA 650 Organization Theory: Strategy and Structure 3(3-0)
A systems approach to studying the design and administration of complex organizations. Diverse organizational settings require the capacity to develop appropriate decision making and planning strategies to produce the desired organizational goals, given the organization’s environment. This course is approved for offering in a distance learning format.

MSA 660 Marketing Administration 3(3-0)
This course is concerned with the application of appropriate marketing concepts and techniques to the private sector business and nonprofit organizations’ marketing and communication activities. This course is approved for offering in a distance learning format.

MSA 661 Diversity and Multiculturalism in the Workplace 3(3-0)
An examination of the skills needed to successfully administer an environment that facilitates workplace diversity and multiculturalism within the contexts of domestic and global organizations.

MSA 665 Strategic Policy Administration 3(3-0)
Applies decision-making models for policy analysis and implementation in the private and public sector environments. A case study course covering organizational analysis and operational programming. Prerequisite: Minimum of 9 semester credit hours of MSA core courses, including MSA 634 or MSA 635. This course is approved for offering in a distance learning format.

MSA 668 Integrative Analysis of Administration 3(Spec)
MSA 668 builds upon the information and skills learned in the core and concentration course work, and the student’s employment experiences. The course trains the student in application of administrative theory and research to practical issues and problems found in occupational situations. In these senses of joining theory, research and practice with the practical workday world, the course is truly integrative of the student’s knowledge, skills, and professional life. This course is approved for offering in a distance learning format. Prerequisites: MSA 600, MSA 602 or MSA 634 or MSA 635, MSA 640 all with a grade of C or better; 21 hours of graduate credit.

MSA 690 Internship 1-3(Spec)
Provides a supervised, practical, in-depth administrative experience in an organization related to the MSA student's concentration area. Prerequisites: 18 hours completed in the MSA program and permission of the MSA Director.

MSA 691 Independent Study 1-2(Spec)
Directed reading or research on an approved topic in administration. Prerequisite: permission of instructor and director of MSA program.

MSA 696 Special Topics 3(3-0)
Selected topics of interest to students which are not included in existing courses. Specific topic will be listed on the student's transcript. This course may be offered in an online or hybrid format.

MSA 699 Applied Research Project in Administration 3(Spec)
Research project on a practical organizational administrative issue and/or problem integrating theoretical, methodological, and applied knowledge from core and concentration coursework with student's professional experience. This course is approved for offering in a distance learning format. Prerequisites: MSA 600; MSA 602 or MSA 634 or MSA 635; MSA 603 or MSA 640 all with a grade of C or better; 24 hours of graduate credit.
Master of Arts (M.A.) in Cultural Resource Management

College of Humanities and Social & Behavioral Sciences

Minimum Totals for Graduation: 36 hours

The graduate program of study in Cultural Resource Management is designed to prepare professionals for careers in the growing field of cultural resource management. Practitioners in this multifaceted field assist private and government entities in identifying cultural resources such as archaeological and historical sites, culturally or historically significant structures, and culturally significant locations or resources, assessing such sites and resources, and developing plans for their preservation, curation, and ethical use. The CRM program will equip students with knowledge of disciplinary methods as well as federal guidelines and regulations governing the practice in this field.

Admission Requirements, Retention & Termination Standards

Application Deadline: February 1 for fall admittance consideration; September 30 for spring admittance consideration.

In addition to the general university requirements for admission to the Cultural Resource Management program, applicants must also provide the following:

1. evidence of an overall undergraduate grade point average of 3.0.
2. evidence of at least 18 hours of undergraduate course work in anthropology, history, museum studies, or cognate fields;
3. an essay (two or three pages, double-spaced) which includes a discussion of professional goals, how the applicant's background will lead to success in the program, and how the program will assist the applicant in achieving her or his goals. This essay will replace the written statement requested as part of the application to the College of Graduate Studies.
4. three letters of recommendation from former professors or professionals in a field related to CRM that attest to the applicant's potential to succeed in the program.
5. If the applicant is an international student for whom English is not the first language, a score of 79 or higher on the iBT Test of English as a Foreign Language (TOEFL) or 6.5 IELTS.

6. Per university policy, conditional admission may be considered for applicants with backgrounds or grade point averages that do not meet these requirements. Courses taken to meet these requirements may not be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all conditional requirements.
7. Students may transfer up to 9 hours of graduate credit in consultation with a program advisor. Retention and termination policies will follow the policies and procedures laid out in the CMU Graduate Bulletin under the heading Academic and Retention Standards.

Required Courses (18 hours)

ANT 626 - Theory and Research in Archaeology 3(3-0)
ANT 645 - Cultural Resource Management in Archaeology 3(3-0)
HST 580 - Public History 3(3-0)
HST 791 - Graduate Research 3-6(Spec)
MST 610 - International Cultural Laws and Ethics 3(3-0)
MST 620 - Museum Management 3(3-0)

Note: students must complete at least 3 hours of HST 791. Students may substitute HST 711, 713, 715, or 717 for HST 791.

Additional Requirements I (3-6 hours)

Select one of the following Internship/Fieldwork capstone experiences for at least 3 hours' credit:

ANT 500 - Field School in Archaeology 3-6(Spec)
HST 595 - Internship in Public History 1-6(Spec)
MST 598 - Museum Internship 6(Spec)

Additional Requirements II (3-6 hours)

ANT 798 - Thesis 3-6(Spec)
HST 798 - Thesis 1-6(Spec)
MST 798 - Creative Endeavors in Museum Studies 3(3-0)

Note: Students completing a thesis must initiate the formation of a review committee consisting of a chair and at least one other reader.

Additional Requirements III

Comprehensive examination on laws and ethics relevant to cultural resource management. The examination will be scheduled in the final semester of the student’s program and will be evaluated by a committee of at least two examiners.

Electives (6-12 hours)

Students must select elective courses, usually from the list below, in consultation with a program advisor. All students are strongly urged to select either ANT 520, North American Indian Ethnohistory or HST 523 American Indian History. Courses not approved by an advisor may not be applied to the student's degree program. It is not advisable for a student to complete more than 3 hours of any variable credit courses on the list below.

ANT 521 - North American Indian Ethnohistory 3(3-0)
ANT 540 - Archaeological Field and Laboratory Techniques 3(3-0)
ANT 542 - Methods in Forensic Anthropology: Osteology and Skeletal Analysis 4(3-2)
ANT 544 - Great Lakes Archaeology 3(3-0)
ANT 588 - Special Topics in Anthropology 1-10(Spec)
ANT 698 - Independent Studies in Anthropology 1-12(Spec)
BLR 521 - Environmental Law and Policy 3(3-0)
EDL 609 - Administration of Volunteer Programs 3(3-0)
EDL 610 - Grants and Fund Procurement 3(3-0)
GEO 500 - Advanced Cartography 3(2-2)
GEO 501 - Principles and Applications of Geographic Information System 3(2-2)
GEO 503 - Advanced Geographic Information Systems 3(2-2)
GEO 508 - Digital Remote Sensing 3(2-2)
GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)
GEO 515 - Geography of the Great Lakes Region 3(3-0)
GEO 516 - Advanced Remote Sensing Systems 3(2-2)
GEO 530 - Land Use Planning 3(3-0)
GEO 531 - Integrated Land Use Planning 3(3-0)
HST 511 - Colonial British America 3(3-0)
HST 512 - Era of the American Revolution 3(3-0)
HST 514 - Democracy, Expansion, and Reform in America, 1824-1848 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 526 - Modern American Political Culture, 1865-Present 3(3-0)
HST 583 - Archival Administration 3(3-0)
HST 585 - Oral History 3(3-0)
HST 600 - Historiography 3(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 636 - Colloquium in Ancient History 3-6(3-0)
HST 650 - Colloquium in European History to 1450 3(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 681 - Historic Preservation 3(3-0)
HST 690 - Advanced Readings 1-9(Spec)
HST 695 - Special Studies Abroad 3-15(Spec)
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 738 - Seminar in Ancient History 3-6(3-0)
HST 740 - Seminar in Medieval West 3(3-0)
HST 741 - Seminar in Early Modern Europe 3(3-0)

Note:

For a student to complete more than 3 hours of any variable credit courses on the list below, the student must complete at least 3 hours of HST 791. Students may substitute HST 711, 713, 715, or 717 for HST 791.

(Continued)
Graduate Certificate in Cultural Resource Management
College of Humanities and Social & Behavioral Sciences

Minimum Totals for Graduation: 18-21 hours

The graduate certificate program of study in Cultural Resource Management is designed to prepare professionals for careers in the growing field of cultural resource management. Practitioners in this multifaceted field assist private and government entities in identifying cultural resources such as archaeological and historical sites, culturally or historically significant structures, and culturally significant locations or resources, assessing such sites and resources, and developing plans for their preservation, curation, and ethical use. The CRM certificate program will equip students with knowledge of disciplinary methods as well as federal guidelines and regulations governing the practice in this field.

Admission Requirements, Retention & Termination Standards

Application Deadline: February 1 for fall admittance consideration; September 30 for spring admittance consideration.

In addition to the general university requirements for admission to the Cultural Resource Management program, applicants must also provide the following:

1. evidence of an overall undergraduate grade point average of 3.0.
2. evidence of at least 18 hours of undergraduate course work in anthropology, history, museum studies, or cognate fields;
3. an essay (two or three pages, double-spaced) which includes a discussion of professional goals, how the applicant’s background will lead to success in the program, and how the program will assist the applicant in achieving her or his goals. This essay will replace the written statement requested as part of the application to the College of Graduate Studies.
4. three letters of recommendation from former professors or professionals in a field related to CRM that attest to the applicant’s potential to succeed in the program.
5. If the applicant is an international student for whom English is not the first language, a score of 79 or higher on the iBT Test of English as a Foreign Language (TOEFL) or 6.5 IELTS.
6. Per university policy, conditional admission may be considered for applicants with backgrounds or grade point averages that do not meet these requirements. Courses taken to meet these requirements may not be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all conditional requirements.
7. Students may transfer up to 9 hours of graduate credit in consultation with a program advisor.

Retention and termination policies will follow the policies and procedures laid out in the CMU Graduate Bulletin under the heading Academic and Retention Standards.

Required Courses (15 hours)

ANT 626 - Theory and Research in Archaeology 3(3-0)
ANT 645 - Cultural Resource Management in Archaeology 3(3-0)
HST 580 - Public History 3(3-0)
MST 610 - International Cultural Laws and Ethics 3(3-0)
MST 620 - Museum Management 3(3-0)

Additional Requirements I (3-6 hours)

Select one of the following Internship/Fieldwork capstone experiences for at least 3 hours’ credit:

- ANT 500 - Field School in Archaeology 3-6(Spec)
- HST 595 - Internship in Public History 1-6(Spec)
- MST 598 - Museum Internship 6(Spec)

Additional Requirements II

Comprehensive examination on laws and ethics relevant to cultural resource management. The examination will be scheduled during the final semester of the student’s program and will be evaluated by a committee of at least two examiners.

Total: 18-21 semester hours

Graduate Certificate in Cultural Resource Management

HST 742 - Seminar in Eighteenth-Century European History 3(3-0)
HST 744 - Seminar in Nineteenth-Century European History 3(3-0)
HST 758 - Seminar in Twentieth-Century European History 3(3-0)
HST 763 - Seminar in Latin American History 3(3-0)
HST 795 - Seminar Abroad 3-15(Spec)

KMT 555 - Market and Sales Forecasting 3(3-0)
KMT 560 - International Marketing 3(3-0)
KMT 547 - Museum Science Laboratory 3(0-6)
MST 550 - Museum Collections Management and Care 3(3-0)
MST 551 - Museum Education and Interpretation Techniques 3(3-0)
MST 575 - Independent Study in Museum Studies 3(3-0)
MST 570 - Seminar in Advanced Exhibit Design and Construction 3(3-0)
MST 775 - Seminar in Funding and Fundraising 3(3-0)
PSC 516 - Environmental Politics and Policy 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
PSC 677 - The Public Sector Role in Post-Disaster Recovery 3(3-0)
PSC 711 - Public Personnel Administration Practice 3(3-0)
PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
RPL 5080R - Budgeting & Funding for Leisure Service Agencies 3(3-0)
RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)
RPL 521 - Fund Development & Grant Writing for Public & Non-profit Organizations 3(3-0)
RPL 545 - Marketing of Leisure Services 3(3-0)
RPL 552 - Environmental Interpretation 3(3-0)
RPL 570 - Wilderness Issues and Policy 3(3-0)
SPE 550 - Teaching Culturally Diverse Students 3(3-0)

Total: 36 semester hours
Master of Arts (M.A.) in Humanities  
College of Humanities and Social & Behavioral Sciences

Minimum Totals for Graduation: 30 hours
Susan A. Schiller, Ph.D., Director  
032 Anspach Hall, 989-774-3681

The Master of Arts in Humanities is a degree designed for generalists, for those more interested in synthesis than specialization. It provides an integrated study of the humanities in a cross-disciplinary format. Because the various areas of the humanities are naturally interrelated, this format emphasizes connection rather than fragmentation. The courses for the 30-semester hour program are generally selected from such traditional areas of the humanities as history, English, philosophy, religion, art, music, and broadcast and cinematic arts; they may, however, also include such areas as women's studies, political science, sociology, anthropology, and theatre.

The program is flexible enough to meet the needs of a great variety of students. It is an appropriate degree choice for students seeking a graduate degree which offers educational development, personal development, or a focus on interdisciplinary knowledge.

Note: Some courses listed are not offered on a regular basis and some courses may only be offered by Global Campus. Several courses are available in an online format.

Requirements I (24 hours)
A minimum of 24 hours of graduate credit in the Humanities, selected in consultation with advisor, including:

- History Requirements (6-9 hours)
- English Requirements (6-9 hours)
- Other Requirements (12-18 hours)

These are selected from the following areas with approval from the advisor:

- Art
- Music (non-studio/non-performance)
- Religion
- Philosophy
- Broadcast and Cinematic Arts
- Political Science
- Sociology
- Anthropology
- Theatre (non-performance courses)

See Structure (Core Courses) below.

Note: A minimum of 15 hours of the above courses must be in courses numbered 600 or above.

Requirements II (6 hours)
Select one of the following plans:

Plan A (6 hours)
Thesis with oral defense.
HUM 799 - Thesis 1-6(Spec)

Plan B (6 hours)
6 hours of additional coursework approved by the advisor, plus a scholarly paper.

Total: 30 semester hours

Structure (Core Courses)
In order to ensure both coherence and the advantage of complementary disciplinary approaches in the program of studies, each student's coursework must be approved in advance by a faculty advisor. Coursework leading to the degree will be organized around a core (15-18 hours) of courses that are based on topics and themes or on the individual student's interests and goals.

The following is a list of representative topics that have been approved by the M.A. in Humanities Council. Approved topics or themes include:

I. The Rise of Industrial Society
II. Images and Ideas of Self
III. Contemporary Issues in the Humanities: Race, Class and Gender
IV. Popular Culture Studies
V. Native American Issues in Modern Culture
VI. Global and Cultural Studies

Alternative topics or themes to those listed above may be proposed by the student as well, and/or a student may also choose a "broad" approach that is not based on a single topic or theme.

Course Descriptions:

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.

HUM 610 Seminar in American Individualism 3(3-0)
Analysis of the varieties and values of American individualism through literary, historical and sociological sources. Prerequisite: Admission to M.A. in Humanities program.

HUM 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

HUM 697 Independent Study 3-6(Spec)
Explorations of special problems in subject areas found within the Humanities individually agreed upon by student and instructor. May be repeated a maximum of six hours. Prerequisites: Approval by instructor and program director required before registration.

HUM 797 Special Topics in Humanities 1-12(Spec)
Interdisciplinary study of selected topics in the humanities. Prerequisite: Permission of instructor, will vary by topic offered.

HUM 799 Thesis 1-6(Spec)
CR/NC only. Prerequisites: 15 hours of graduate work in the humanities and written permission of advisor.
Neuroscience
College of Humanities and Social & Behavioral Sciences

Gary Dunbar, Director
Health Professions Building 2182; 989-774-3282

Jamie Alan, Ph.D., University of North Carolina. Regulation of signal transduction pathways as they relate to development of cancer in epithelial and in cultured human cells.

Richard W. Backs, Ph.D., University of Southern California. Human factors, psychophysiology, aging, attention, and emotion

Gary Dunbar, Ph.D., Clark University. Stem cell, dietary supplements, and pharmacological therapies for neurodegenerative diseases, including Huntington’s, Alzheimer’s, and Parkinson’s diseases.

Kenneth Jenrow, Ph.D., Oakland University. Electrophysiology, mitigating neuroinflammation and its deleterious effects on synaptic plasticity and cognitive function.

Jamie Johansen, Ph.D., Michigan State University. Developing reliable mouse models of neurodegenerative diseases, such as Parkinson’s and Kennedy’s diseases, for testing potential therapies.

Yannick Marchalant, Ph.D., université de Caen, France. Influence of brain aging and neuroinflammatory processes on the development of neurodegenerative diseases.

Kevin Park, Ph.D., University of Illinois at Urbana-Champaign. Molecular genetics and neurobiology of neurodegenerative diseases, preclinical therapeutic development.

Mark Reilly, Ph.D., West Virginia University. Experimental analysis of behavior, operant/respondent conditioning, animal learning, quantitative models, behavioral pharmacology, and substance abuse.

Julien Rossignol, Ph.D., Nantes University, France. Molecular biology, cellular biology, and immunology. Optimizing adult stem cell transplantation technology in the context of neurodegenerative diseases.

Michael Sandstrom, Ph.D., Ohio State University. Assessing brain plasticity, compensatory neuronal activity, or neurochemical control during active behavior at various stages of deteriorative brain diseases such as Parkinson’s and Huntington’s using animal models.

Reid Skeel, Ph.D., University of Florida. Functional applications of neuropsychological assessments.

Michelle Steinhilb, Ph.D., genetic models of human neurodegenerative disease, cellular and molecular neurobiology.

Ksenia Ustinova, Ph.D, Russian State University of Sport. Motor control and learning, rehabilitation of patients with neurological diseases including stroke, spinocerebellar ataxia, Parkinson’s disease

Master of Science (M.S.) in Neuroscience

Minimum Totals for Graduation: 30 hours

The Masters of Science (M.S.) in Neuroscience Program at Central Michigan University is designed to give each student a comprehensive understanding of the core principles in neuroscience and the requisite training that will prepare students for further, doctoral-level graduate training or for positions in academics, industry, or government that utilize highly trained research skills in specific areas of neuroscience. Throughout the program, all students are expected to be actively involved in research with a Program faculty member, who serves as a mentor. The focus of the M.S. Program in Neuroscience is to build a broad-based and comprehensive understanding of the basic principles of neuroscience and develop a strong background for applied research in some specific area of neuroscience. Current areas of specific research training include studying the causes of and potential treatments for neurodegenerative diseases, the CNS involvement in behavioral learning in the context of abused substances, understanding the mechanisms underlying rehabilitation from movement disorders, and potential treatments for CNS insults, including spinal cord injury, cancer, and radiation-induced cognitive deficits. Students are encouraged to contact Program faculty members in their area of research interest prior to submitting application materials.

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<td>See Admission Requirement Details Below</td>
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The application deadline for receipt of all materials will be March 1. When applying for the M.S. degree in Neuroscience, applicants must send three letters of reference, official transcripts, and official GRE scores directly to the Program Director. Applicants are expected to complete a Bachelor of Science degree, have at least 15 hours of courses in neuroscience, chemistry, and/or biology (including biologically-based psychology courses), have at least 3 hours of statistics, and have a 3.0 grade point average (on a 4.0 scale) to gain admittance to the program. Preference will be given to students with prior research experience, especially in the area of neuroscience. Students who are deficient in certain subject areas, such as statistics or chemistry, will be expected to make up these deficiencies in addition to the normally prescribed graduate coursework for the degree. A maximum of 9 credit hours earned during non-degree status may be applied toward the M.S. degree in Neuroscience.

The M.S. degree in Neuroscience is based upon the satisfactory completion of a minimum of 30 semester hours of graduate work, including the successful completion of the Principles of Neuroscience courses and successful completion of a thesis (with oral defense). Students who are unable to pass the comprehensive examination for the Principles of Neuroscience courses after three attempts will be dismissed from the program. Students who complete the required coursework and successfully defend their thesis will attain the Master of Science in Neuroscience degree. All other retention and termination standards for the program follow University policy as specified in the Graduate Bulletin.

Required Courses I (18 hours)

- NSC 501 - Principles of Neuroscience I 4(4-0)
- NSC 502 - Principles of Neuroscience II 4(4-0)
- NSC 690 - Research Seminar Neuroscience 4(4-0pec)
- NSC 798 - Thesis: Design 1-3(Spec)
- NSC 799 - Thesis: Implementation 1-3(Spec)

*Note: A minimum of 4 hours of NSC 690 and 6 hours from a combination of NSC 798 and NSC 799 is required.*

Required Courses II (3 hours)
Select one of the following:

- BIO 500 - Biological Statistics 3(2-2)
- PSY 511 - Statistics in Psychology 3(3-1)

Required Courses III (3 hours)
Select one of the following:

- BIO 600 - Biological Research Design and Analysis 3(2-2)
- PSY 611 - Research Design 3(3-0)

Electives (6 hours)
To be chosen in consultation with an advisor.

*Note: Students need a minimum of 2 credit hours from elective courses at the 600 level.*

Total: 30 semester hours

Doctor of Philosophy (Ph.D.) in Neuroscience

Minimum Totals for Graduation: 90 hours

The Doctor of Philosophy (Ph.D.) in Neuroscience Program at Central Michigan University is designed to give each student a comprehensive understanding of the core principles in neuroscience and the requisite training that will prepare students for positions in academics, industry, or government that utilize highly trained research skills in specific areas of neuroscience. The foundation of the Program is provided during the first two years, which encompasses all the requirements for the Master of Science (M.S.) degree in Neuroscience. Throughout the program, all students are expected to be actively involved in research with a Program faculty member, who serves as a mentor. Upon receiving
the M.S. degree in Neuroscience (or its equivalent, for students who enter the Ph.D. Program after their second year), students will work closely with their mentor to establish a line of research that will lead to a publishable-quality major paper and dissertation. As such, the focus of the Ph.D. Program in Neuroscience is to build upon the student’s broad-based and comprehensive understanding of the basic principles of neuroscience and develop a strong background for applied research in some specific area of neuroscience. Current areas of specific research training include studying the causes of and potential treatments for neurodegenerative diseases, the CNS involvement in behavioral learning in the context of abused substances, understanding the mechanisms underlying rehabilitation from movement disorders, and potential treatments for CNS insults, including spinal cord injury, cancer, and radiation-induced cognitive deficits. Students are encouraged to contact Program faculty members in their area of research interest prior to submitting application materials.

**Admission Requirements, Retention & Termination Standards**

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The application deadline for receipt of all materials will be March 1. When applying for the Ph.D. degree in Neuroscience, applicants must send three letters of reference, official transcripts, and official GRE scores directly to the Program Director. Applicants are expected to complete a Bachelor of Science degree, have at least 15 hours of courses in neuroscience, chemistry, and/or biology (including biologically-based psychology courses), have at least 3 hours of statistics, and have a 3.0 grade point average (on a 4.0 scale) to gain admittance to the program. Preference will be given to students with prior research experience, especially in the area of neuroscience. Students who are deficient in certain subject areas, such as statistics or chemistry, will be expected to make up these deficiencies in addition to the normally prescribed graduate coursework for the degree. A maximum of 9 credit hours earned during non-degree status may be applied toward the M.S. or Ph.D. degree in Neuroscience.

The Doctor of Philosophy degree in Neuroscience is based upon the satisfactory completion of a minimum of 90 semester hours of graduate work, including the successful completion of the Principles of Neuroscience courses and successful completion of a thesis (with oral defense). Students who are unable to pass the comprehensive examination for the Principles of Neuroscience courses after three attempts will be dismissed from the program. Students who complete the required coursework for the first two years and successfully defend the thesis will attain the Master of Science in Neuroscience degree. Thus, each Ph.D. student must complete the equivalent of all the requirements for the M.S. degree in Neuroscience. Upon completion of the requirements for the M.S. degree in Neuroscience, students will be required to complete NSC 800 (a major paper with oral defense) for their qualifying exam. Upon satisfactory completion of their qualifying exam, the student is an official Ph.D. candidate in the Program. Students who do not successfully defend their major paper by the third attempt will be dismissed from the Program. Upon completion of the remaining course requirements and following the successful oral defense of the dissertation, the student will receive the Ph.D. in Neuroscience degree. All other retention and termination standards for the program follow University policy as specified in the Graduate Bulletin.

**Program Requirements**

Admission to doctoral candidacy is based upon satisfactory grades (i.e., maintaining a minimum 3.0 grade point average), completion of thesis requirements, and completion of both semesters of the Principles of Neuroscience (NSC 501 and NSC 502) or passing the comprehensive examination for these courses, and successfully completing NSC 800. The doctoral degree is awarded upon the successful completion and defense of the doctoral dissertation.

**Admission Requirements, Retention & Termination Standards**

**Admission Requirement Snapshot**

| GPA: 3.0 | Entrance Exam: GRE |
| Application Deadline: March 1 (Fall) | See Admission Requirement Details Below |

The application deadline for receipt of all materials will be March 1. When applying for the Ph.D. degree in Neuroscience, applicants must send three letters of reference, official transcripts, and official GRE scores directly to the Program Director. Applicants are expected to complete a Bachelor of Science degree, have at least 15 hours of courses in neuroscience, chemistry, and/or biology (including biologically-based psychology courses), have at least 3 hours of statistics, and have a 3.0 grade point average (on a 4.0 scale) to gain admittance to the program. Preference will be given to students with prior research experience, especially in the area of neuroscience. Students who are deficient in certain subject areas, such as statistics or chemistry, will be expected to make up these deficiencies in addition to the normally prescribed graduate coursework for the degree. A maximum of 9 credit hours earned during non-degree status may be applied toward the M.S. or Ph.D. degree in Neuroscience.

The Doctor of Philosophy degree in Neuroscience is based upon the satisfactory completion of a minimum of 90 semester hours of graduate work, including the successful completion of the Principles of Neuroscience courses and successful completion of a thesis (with oral defense). Students who are unable to pass the comprehensive examination for the Principles of Neuroscience courses after three attempts will be dismissed from the program. Students who complete the required coursework for the first two years and successfully defend the thesis will attain the Master of Science in Neuroscience degree. Thus, each Ph.D. student must complete the equivalent of all the requirements for the M.S. degree in Neuroscience. Upon completion of the requirements for the M.S. degree in Neuroscience, students will be required to complete NSC 800 (a major paper with oral defense) for their qualifying exam. Upon satisfactory completion of their qualifying exam, the student is an official Ph.D. candidate in the Program. Students who do not successfully defend their major paper by the third attempt will be dismissed from the Program. Upon completion of the remaining course requirements and following the successful oral defense of the dissertation, the student will receive the Ph.D. in Neuroscience degree. All other retention and termination standards for the program follow University policy as specified in the Graduate Bulletin.

**Program Requirements**

Admission to doctoral candidacy is based upon satisfactory grades (i.e., maintaining a minimum 3.0 grade point average), completion of thesis requirements, and completion of both semesters of the Principles of Neuroscience (NSC 501 and NSC 502) or passing the comprehensive examination for these courses, and successfully completing NSC 800. The doctoral degree is awarded upon the successful completion and defense of the doctoral dissertation.
Graduate Certificate in Data Mining  
College of Science and Technology

This is an interdepartmental program. Contact the Mathematics, Computer Science, or Geography department for more information.

Minimum Totals for Graduation: 15 - 18 hours

The Data Mining Certificate program is designed to give each student a comprehensive training of basic foundation, advanced knowledge and applications of data mining. The primary goal is to develop a high quality program and a creative learning environment that enable students to acquire advanced data mining knowledge and experience in real world applications, team work and presentations that are essential in work place.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

**Admission Requirements**

Admission is dependent upon a student having completed at least three years of undergraduate program with a minimum GPA of 3.0 overall and at least 3 credit hours of basic statistics or equivalent. An international student must satisfy the required minimum TOEFL score as specified in the Graduate Bulletin. The consideration of admission deadline is the same as the University policy as specified in the Graduate Bulletin. The application deadline for consideration of a graduate teaching assistantship is March 1st. The materials include (1) undergraduate transcript or graduate transcript, if a student is already in a graduate program, (2) the graduate assistantship application form, and (3) three letters of recommendation.

**Certificate Requirements**

The Data Mining certificate program requires a successful completion of 15 to 18 credit hours of graduate course work. Students must have CMU graduate student status. If a student has taken at least one course (or equivalent course) from the list of required and primary elective courses, the student is required to have a total of 15 credit hours. If a student has taken more than one of these courses, the student will have to take courses from the secondary electives in order to fulfill the 15 hours requirement. If a student has not taken any of these courses, the student is required to take all the 18 credit hours. Students must have an earned Bachelor's degree before receiving the certificate.

**Required Core Courses (9 hours)**

- CPS 685 - Pattern Recognition and Data Mining (3-0)
- GEO 503 - Advanced Geographic Information Systems (3-2-2)
- STA 591 - Data Mining Techniques I (3-0)

**Primary Electives (6-9 hours)**

Choose at least two out of the following courses. Primary electives are to be chosen in consultation with and approval of a data mining program advisor. The choice of two courses depends on the background a student has prior to joining the program.

- CPS 541 - Databases (3-0)
- CPS 585 - Applied Data Engineering I (3-0)
- GEO 512 - Quantitative Methods for Spatial Analysis (3-2-2)
- STA 580 - Applied Statistical Methods I (3-0)
- STA 591 - Data Mining Techniques I (3-0)

Notes: You may select CPS 585 or 541, but not both. CPS 541 is recommended for Computer Science Majors.

**Secondary Electives (0-6 hours)**

Any graduate level quantitative or computational course. Secondary electives are to be chosen in consultation with and approval of a data mining program advisor.

**Total: 15-18 semester hours**

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**Master of Arts in Teaching Integrated Science (M.A.T.)**

**College of Science and Technology**

**Contact:** John Scheide, Dept. of Biology  
989-774-3291; scheij1@cmich.edu

**Minimum Totals for Graduation: 30 - 36 hours**

The Master of Arts in Teaching Integrated Science is designed for K-12 teachers with a major in Integrated Science (Di endorsement) or Science (DX endorsement) who want to balance and strengthen their science content knowledge and skills in the broad arena of science. Secondary teachers with an endorsement in special education or math are required to submit GRE General scores (contact the Department of Biology for application materials and deadline dates). All degree requirements must be completed in 7 years or less. Since most courses will need to be taken in the summer, full-time teachers may take up to 5 years to complete the degree.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

**Admission Requirement Snapshot**

- **GPA:** 3.0 (and 2.7 in major)  
- **Entrance Exam:** N/A  
- **International Application Deadline:** July 1 (Fall), Oct. 1 (spring)

See Admission Requirement Details Below

To be eligible for Regular Admission to the Master of Arts in Teaching Integrated Science applicants should have:

1. completed an undergraduate degree with a major in integrated science, science, biology, chemistry, earth science, physical science or physics (or the equivalent) with a 2.7 or better grade point average in their major and a 3.0 grade point average overall.
2. taken at least 30 semester hours of undergraduate science.
3. current teacher certification with a science endorsement.
4. completed at least one year of teaching at the level of their certification in a permanent (not substitute) teaching position.

Applicants are required to submit a statement of interests, transcripts, evidence of teacher certification, and three letters of recommendation. An applicant who does not meet the foregoing requirements may be granted Conditional Admission with the understanding that additional coursework may be required. Applicants from non-English speaking countries are required to demonstrate proficiency in English via the TOEFL exam. Applicants for graduate teaching assistantships (Biology department only) are required to submit GRE General scores (contact the Department of Biology for application materials and deadline dates).

Select one of the following Plans:
Plan A (30 hours)
Thirty-six semester hours of graduate work including 6 credit hours of thesis and at least one credit hour in seminar. Since the thesis is an extensive research project, students planning further graduate study in science education may choose this option as a prelude to doctoral work.

Required Science Education Courses (9 hours)
- EDU 615 - Survey of Science Education 3(3-0)
- EDU 618 - The Nature of Science in Science Teaching 3(3-0)
- EDU 645 - Advanced Science Teaching Methods 3(3-0)

Elective Science Content Courses (12-14 hours)
The electives must be 500- or 600-level science courses in astronomy, biology, chemistry, earth science, engineering, environmental education, geology, physical science, or physics chosen with the approval of your advisor. These courses should strengthen your teaching expertise or apply toward a new area of endorsement. Students with elementary certification may choose to take courses that are specifically designed to provide content and hands-on science appropriate for K-8 classrooms. Students who are certified at the secondary level are encouraged to focus on graduate-level courses in one of the sciences. All students must identify and take at least one course at a field station or participate in a significant field experience, laboratory research experience or internship-like experience approved by the advisor.

Required Capstone Courses (7-9 hours)
Required Capstone Course I (6 hours)
Select one of the following:
- EDU 698 - Thesis 1-6(Spec)
- SCI 798 - Thesis 1-6(Spec)

Required Capstone Course II (1-3)
Select one of the following:
- EDU 780/MLE 780 - Master of Arts Capstone Seminar 3(3-0)
- SCI 730 - Seminar 1(1-0)

Plan B (36 hours)
Thirty-six semester hours of graduate-level coursework approved by the advisory committee. In addition, students must submit an approved Plan B paper demonstrating either research or independent study in an area of science or science education. The Plan B paper might focus on improving the teaching of science in your school including improvements in curriculum, instruction, or leadership in science teaching. Or it might focus on answering a particular question in any one of the science disciplines, for example, someone might look at the various ferns found at Neithercut Woodland and then develop a guide to be used by those visiting the property.

Required Science Education Courses (9 hours)
- EDU 615 - Survey of Science Education 3(3-0)
- EDU 618 - The Nature of Science in Science Teaching 3(3-0)
- EDU 645 - Advanced Science Teaching Methods 3(3-0)

Elective Science Education Courses (23-25 hours)
The electives must be 500- or 600-level science courses in astronomy, biology, chemistry, earth science, engineering, environmental education, geology, physical science, or physics chosen with the approval of your advisor. These courses should strengthen your teaching expertise or apply toward a new area of endorsement. Students with elementary certification may choose to take those courses that are specifically designed to provide content and hands-on science appropriate for K-8 classrooms. Students who are certified at the secondary level are encouraged to focus on graduate-level courses in one of the sciences. All students must identify and take at least one course at a field station or participate in a significant field experience, laboratory research experience or internship-like experience approved by the advisor.

Required Capstone Course (2-4 hours)
- SCI 790 - Research in Science Education 2-4(Spec)

Total: 30-36 semester hours

Examination: Students must pass a comprehensive oral and/or written examination over the coursework and administered by the advisory committee.

Transfer Credit: A maximum of 10 semester credits are accepted for transfer, with the approval of the advisory committee.
research assistantship in place. Students may apply for a teaching assistantship through one of the participating academic departments (deadline February 1).

A formal evaluation of each student’s training will be carried out within the first semester of the student’s admission into the EES Ph.D. program by the student’s mentor. This evaluation will be used to identify each student’s strengths and limitations in academic training and background; the mentor will then determine the plan of study including recommending courses to be taken and identifying professional activities needed to bolster their academic background. Students must form a dissertation committee within their first year of graduate work. The student’s dissertation committee will be composed of the faculty mentor plus 3 faculty members, one of whom is outside the student’s immediate area of specialization.

Student progress will be assessed at mandatory annual meetings between each student and the dissertation committee. Each student will prepare a proposal describing the research to be done for the dissertation prior to the comprehensive exam, which will be administered through the doctoral committee within the first 2 years of admission to the program. Students will have two opportunities to pass the comprehensive exam; those who fail a second time will be terminated from the program and encouraged to complete the requirements for a related M.S. degree (such as biology or GIS). Finally, each student will defend the final dissertation in a public presentation summarizing research results, followed by an oral defense. The public presentation and defense of the dissertation will be judged and voted on by the committee and must be approved by the Office of Research and Graduate Studies. All EES students will be encouraged to publish their results in reputable peer-reviewed journals and to present at professional conferences at local, regional and international venues. We anticipate full-time students will complete the program in a 4-5 year period.

Program Requirements

The EES Ph.D. is designed to be a research degree in which students are trained primarily by conducting research under the guidance of a faculty mentor. The program will utilize a suite of core courses plus elective courses to augment the intensive research training. Core courses are designed to provide a range of students with universal skill-sets (analytical, conceptual, communication) needed to conduct primary systems-level research in complex environments. To ensure students receive training in a broad array of research tools, each student will complete elective graduate course work in related disciplines. Students will have the option to take up to 6 credits in a special topics course. Successful completion of the Ph.D. requires a minimum of 60 hours of graduate work beyond the bachelor’s degree. Up to 30 hours of relevant graduate work may be transferred for students entering with a master’s degree in a related field. Each student’s program of study will be developed in consultation with the faculty mentor and approved by the program director. Typically, students entering with a bachelor’s degree will take 12-30 hours of disciplinary elective courses and 12-30 hours of special topics and directed research credits (and students entering with a relevant master’s degree will take 3-9 hours of disciplinary elective courses and 3-9 hours of special topics and directed research, or more depending on transfer credits) in addition to the required core courses and the dissertation.

Required Courses (6 hours)
EES 701 - Earth and Ecosystem Science Colloquium 1-2(Spec)
EES 702 - Research Principles and Paradigms 2(2-0)
EES 703 - Advances in Earth and Ecosystem Science 2(2-0)

Note: EES 701 will be taken twice for a total of 2 hours.

Elective Courses I (3-30 hours)
At least 3 credits elected from the following with the consent of the mentor and program director:
- Biology: 500-700 level BIO courses
- Chemistry: 500-700 level CHM courses
- Geology and Meteorology: 500-600 level GEL or MET courses
- Geography: 500-700 level GEO courses
- Mathematics and Statistics: 500-700 level MTH or STA courses

Elective Courses II (3-30 hours)
EES 790 - Special Topics in Earth and Ecosystem Science 1-6(Spec)
EES 796 - Directed Research in Earth and Ecosystem Science 1-30(Spec)

Dissertation (12 hours)
EES 899 - Dissertation 1-12(Spec)

Total: 60 semester hours

Course Descriptions: EES
EES 701 Earth and Ecosystem Science Colloquium 1-2(Spec)
Examination and development of effective methods in professional scientific communication through the use of contemporary tools and aids. May be repeated up to 2 credits. Prerequisite: Admittance to the Earth and Ecosystem PhD program.

EES 702 Research Principles and Paradigms 2(2-0)
Examination of key research concepts and communication skills that are integral in conducting primary research in Earth and Ecosystem science. Pre/Co-requisite: EES 701.

EES 703 Advances in Earth and Ecosystem Science 2(2-0)
Application of research advances to discovery and problem solving in Earth and Ecosystem science through a review of contemporary case studies that illustrate key concepts. Prerequisite: EES 701, 702.

EES 790 Special Topics in Earth and Ecosystem Science 1-6(Spec)
Various advanced topics in Earth and Ecosystem science are covered. Student participation is expected. May be repeated for a total of 6 credits. Prerequisite: Admittance to the Earth and Ecosystem PhD program.

EES 796 Directed Research in Earth and Ecosystem Science 1-30(Spec)
Directed research supervised by an Earth and Ecosystem Science faculty member. May be repeated for a total of 30 credits. Prerequisite: Admittance to the Earth and Ecosystem PhD program.

EES 899 Dissertation 1-12(Spec)
Completion of the doctoral dissertation. May be repeated for a total of 12 credit hours. CR/NC only. Prerequisites: Graduate standing in science, successful completion of comprehensive exam.
Doctor of Philosophy (Ph.D.) in the Science of Advanced Materials
College of Science and Technology

Jessica Lapp
E&T Building 228, 989-774-4401

Minimum Totals for Graduation: 60 hours

The science of materials combines elements of chemistry, physics, engineering, and biology, and requires a solid background in mathematics. The CMU Science of Advanced Materials (SAM) Ph.D. program is designed to create a correspondingly interdisciplinary environment that will train effective researchers without erecting artificial boundaries between disciplines. The formal coursework focuses on the scientific framework for studying materials and is organized around the themes of modeling, characterization, and synthesis. These are the key methodologies employed in materials research and the SAM program emphasizes the synergy among them.

The curriculum for the SAM program includes the following components: core courses that establish a solid foundation in the science of materials; elective courses in a number of specialized areas; seminar courses focusing on the current SAM literature and developing essential skills in scientific communication; and the dissertation.

Students may enter the program with diverse backgrounds, but a Master’s degree in a relevant field is required.

**Admission Requirements, Retention & Termination Standards**

**Admission Requirement Snapshot**

| Entrance Exam | Application Deadline: Feb. 1 | See Admission Requirement Details Below |

Applicants already holding a Master’s degree in a materials-related area may apply for entry into the program. Students with a bachelor’s degree in physics, chemistry, biochemistry, biology, geology, engineering, mathematics, or other relevant areas of science may wish to pursue a Master’s degree at CMU before applying to the SAM program. Transcripts of previous undergraduate and graduate studies, GRE scores, a statement of research interests, and three letters of recommendation will be used in evaluating candidates for admission. A completed M.S. thesis on a materials-related topic may be counted toward the directed research credits required for the SAM Ph.D. degree. Although some courses may be transferred or waived based on prior graduate work, no more than 30 credit hours can be transferred. Successful completion of the Ph.D. requires satisfactory completion of a minimum of 60 credit hours beyond the bachelor’s degree.

During the second year, Ph.D. students will take a comprehensive examination to demonstrate competence in their area of specialization and the science of advanced materials more generally. The exam will be based on coursework, the current scientific literature in the area, and other appropriate material. Students passing the comprehensive exam will attain dissertation status. Students who fail will be terminated from the program.

Students normally will begin directed research work no later than during the first semester of residence. Students will meet with their research advisor as early as possible, and form a dissertation committee consisting of at least four members. The committee chair (research director) and two other members will come from the program faculty. One of these will have research expertise outside the student’s immediate area of specialization. One additional committee member may come from an institution external to CMU, including industrial labs, as appropriate.

During the second year, students will prepare an original research proposal, present it as a seminar to program faculty and students and defend it before the dissertation committee. Students will carry out the bulk of their doctoral research in years 2-4 of the program. The final requirements will be the preparation and oral defense of a scholarly dissertation that presents the results of the student’s dissertation research. The oral defense and the dissertation must be approved by the dissertation committee and by the Office of Research and Graduate Studies. A student’s progress through the program will be monitored by an annual review of his or her overall performance by the program director or dissertation committee.

**Required Courses I (8 hours)**

<table>
<thead>
<tr>
<th>Materials Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAM 720 - Inorganic and Nanomaterials Laboratory 4(2-6)</td>
</tr>
<tr>
<td>SAM 721 - Polymeric and Biomaterials Laboratory 4(2-6)</td>
</tr>
<tr>
<td>SAM 723 - Engineering Materials Laboratory 4(2-6)</td>
</tr>
</tbody>
</table>

**Required Courses II (4 hours)**

<table>
<thead>
<tr>
<th>Current Topics Seminar</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAM 685 - Current Topics in the Science of Advanced Materials 1-5(Spec)</td>
</tr>
<tr>
<td>SAM 785 - Seminar in the Science of Advanced Materials 1(1-0)</td>
</tr>
</tbody>
</table>

**Note:** The student may enroll in SAM 685 multiple times until 3 credits are earned.

**Optional Electives (0-30 hours)**
The student may enroll in up to 30 credit hours of elective graduate courses selected in consultation with and approved by the program advisor or graduate coordinator.

**Research (6-36 hours)**

SAM 796 - Directed Research in the Science of Advanced Materials 1-36(Spec)

**Dissertation (12 hours)**

SAM 899 - Dissertation 1-12(Spec)

Total: 60 semester hours

**Course Descriptions: SAM**

**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.

**SAM 620 Chemical Principles in the Science of Materials 3(3-0)**
Principles of inorganic and organic chemistry relevant to the study of materials. Theories of bonding; important synthesis reactions; standard methods of structure determination; chemical properties. Prerequisites: CHM 131 and 132, or CHM 161.

**SAM 630 Physical Principles in the Science of Materials 3(3-0)**

**SAM 685 Current Topics in the Science of Advanced Materials 1-5(1-0)**
One credit graduate seminar focusing on current topics in the science of advanced materials. May be repeated for a total of up to 5 credits. Prerequisite: Admission to SAM Ph.D. program.

**SAM 690 Special Topics in Science of Advanced Materials 1-9(Spec)**
Special topics not included in regular courses in the Science of Advanced Materials program. Course may be taken for credit more than once; total credit not to exceed nine hours. Prerequisites: Admission to SAM program.

**SAM 700 Advanced Materials I: Inorganic and Nanomaterials 3(3-0)**
This course will provide a detailed survey of metals, semiconductors, ceramics, and nanomaterials, with a special emphasis on structure–property relationships. Prerequisites: SAM 620 or SAM 630.

**SAM 710 Advanced Materials II: Polymers, Composites and Biomaterials 3(3-0)**
Structure, properties, characterization, and synthesis of polymeric materials, biomaterials and derived compositions. Prerequisites: SAM 620 or SAM 630.

**SAM 720 Inorganic and Nanomaterials Laboratory 4(2-6)**
Experimental synthesis, characterization, and modeling techniques used for inorganic and nanomaterials. Prerequisites: Admission to SAM Ph.D. program.

(Continued)
SAM 721 Polymeric and Biomaterials Laboratory 4(2-6)
Experimental synthesis, characterization, and modeling techniques used for polymers and biomaterials. Prerequisites: Admission to SAM PhD program.

SAM 722 Material Surface Characterization Laboratory 3(1-6)
Surface characterization techniques for a variety of materials. Prerequisites: SAM 620 or 630. Pre/Co-requisites: SAM 700 or 710.

SAM 723 Engineering Materials Laboratory 4(2-6)
Synthesis, characterization, and modeling techniques used for engineering material including metals, composites, fluids and electrical materials. Prerequisite: Admission to the SAM PhD program.

SAM 785 Seminar in the Science of Advanced Materials 1(1-0)
Development of skills required for critical evaluation and technical presentation of current research topics in the science of advanced materials. Prerequisites: Admission to SAM PhD program. Pre/Co-requisites: SAM 685.

SAM 790 Independent Study in Advanced Materials 1-3(Spec)
Independent study in the area of advanced materials. A proposal for the independent study prepared in consultation with an advisor is required. Prerequisites: Admission to the Science of Advanced Materials Ph.D. program and permission of instructor.

SAM 795 Internship in the Science of Advanced Materials 1-6(Spec)
Develop competencies in the science of advanced materials in an internship. CR/NC only. Prerequisites: Completion of cumulative examinations. Admission to candidacy.

SAM 796 Directed Research in the Science of Advanced Materials 1-36(Spec)
Directed research supervised by a SAM faculty member. May be repeated for a total of 36 credits. Prerequisites: Admission to the SAM program.

SAM 899 Dissertation 1-12(Spec)
Completion of the doctoral dissertation. May be repeated for a total of 12 credits. CR/NC only. Prerequisites: Admission to the SAM Ph.D. program; successful completion of preliminary exams.
Interdisciplinary Courses

These courses are designed to enable students and faculty members to explore areas of special interest and need. In general, each course will be interdisciplinary in nature and under the direction of more than one faculty member. It may utilize such approaches as discussions, readings from basic sources, field trips, workshops, oral and written reports, and invited lectures. Students may be exposed to new areas of knowledge, explore contrasting points of view, or refine basic understandings of value to their development as effective citizens.

At the discretion of his or her advisor, a graduate student may use one or more of these courses to meet cognate or elective requirements on the curriculum. Prerequisite for admission to each of the foregoing courses is permission of the instructor.

ENV 597  Special Topics 1-6(Spec)
HPS 582  Special Topics 1-3(Spec)
   Exploration of special topics in the field of Athletic Training/Sports Medicine and other health related areas. May be repeated to a maximum of 3 hours. Identical to ATR 582. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: ATR 430 and permission of instructor.

IPR 555  Public Relations Internship 3-6(Spec)
   Directed full-time work experience in a professional public relations environment. Prerequisites: IPR 101; BCA 210, BCA 311; COM 264, COM 357; JRN 202, JRN 302, JRN 350, JRN 450; completion of 56 credit hours; prior written approval of the designated internship director; open only to signed Integrative Public Relations majors.

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.

LAR 597  Special Studies in Liberal Arts 1-12(Spec)
   Primarily for graduate students. Prerequisite: permission of instructor.

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.
Standards Leading to Teacher Certification

Introduction
Students seeking to enter the Teacher Education program at Central Michigan University are screened using multiple criteria related to teacher excellence and the CLEAR model for teacher education. The selection criteria assess characteristics appropriate for students pursuing a professional teaching practice that is Content–or knowledge–driven, LEArn-er centered and Reflective/Relevant to the multiple roles and contexts of the professional educator. Once a student is admitted, cognitive and affective skills are both developed and monitored throughout the teacher education experience, which stresses faculty mentoring of all prospective teachers.

Excellent teachers demonstrate an interest in students, an ability to relate to and communicate with diverse students in varied ways, as well as the ability to motivate and facilitate learning. Teacher candidates at CMU must be learner-centered and able to communicate both in writing and in face-to-face interactions with spontaneity and clarity. In addition, students must demonstrate the professional dispositions appropriate to the field of teaching in order to be recommended for certification. Such dispositions include values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and all members of the learning community and affect student learning, motivation, and development as well as the educator’s own professional growth and development. 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.

The Three Cycles of Candidacy
There are three cycles for teacher education candidates to complete in order to fulfill the requirements leading to teacher certification. Students must follow the requirements located on the Teacher Education Road Map (www.ehs.cmich.edu/css) and the requirements of the Michigan Department of Education in effect at the time of admission to the teacher education program.

Cycle I: Admission Candidacy
Each student who expects to earn either an Elementary Provisional Certificate or a Secondary Provisional Certificate must submit an application for admission to the teacher education program. Application forms and related information can be found on the Center for Student Services website at www.ehs.cmich.edu/css. Admission to teacher education occurs twice a year, once in September and once in February, and is based upon the student’s completion of all admission requirements.

Students must be admitted to the teacher education program before being eligible to enroll in professional education courses that indicate “admission to teacher education” as a prerequisite. Admission to the program is valid for five years from the date of admission to teacher education. Changes mandated by the Michigan Department of Education may become effective at any time in a student’s education program.

Cycle II: Continuing Candidacy
This point in the teacher education program has been established as a method to verify candidates’ ongoing growth and development in the teacher education program. All requirements must be fulfilled to continue in the teacher education program and be eligible to move to their student teaching experiences. Cycle II includes, but is not limited to items such as completion of a specified pre-student teaching field experience, departmental approval of all majors and minors and successful completion of all professional education courses. For specific requirements, consult the EHS Teacher Education Road Map located at (www.ehs.cmich.edu/css).

Cycle III: Exit Candidacy
This point in the teacher education program is intended as a verification of eligibility related to graduation and certification. For specific requirements and details about Cycle III, consult the College of Education and Human Services, Center for Student Services web site at www.ehs.cmich.edu/css.

Conflict Resolution and Appeal Procedure

1. A student who has a complaint regarding teacher certification 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 Assistant Director of Professional Education.

3. If the student is still not satisfied, he or she may request in writing a consultation with the Director of Professional Education. In the absence of the Director of Professional Education, the student’s request in writing should be sent to the Dean of the College of Education and Human Services. In such cases, the Dean shall act in place of the Director.

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 Professional Education Selection, Admission and Retention Committee. The Professional Education Selection, Admission and Retention Committee has the authority to overrule decisions made by the Director of Professional Education regarding admission or continuing requirements for the teacher education program or in the recommendation for certification. Appeal decisions made by the Professional Education Selection, Admission and Retention Committee are final.

Teacher Certification
Postbaccalaureate Students
A postbaccalaureate student is defined as a student with a non-teaching bachelor’s degree from a four-year regionally accredited institution who is seeking teacher certification, a student with a teaching degree who is seeking teacher certification and/or endorsement in an additional area, or a student with a teaching degree who is seeking provisional or professional certification and/or endorsement in an additional area.
Provisional Teacher Certification for non-degree seeking Postbaccalaureate Students

1. Postbaccalaureate students must follow the “Standards Leading to Teacher Certification” as published in the Bulletin and meet Michigan Department of Education requirements.

2. Postbaccalaureate students must have majors and/or minors signed by a department advisor in the department offering the major or minor. The request for the signed major/minor will be initiated by the staff in the EHS Center for Student Services. Certification will be recommended for those teaching areas in which CMU presently offers a major or minor. Course substitutions may be approved only by the department advisor.

3. Postbaccalaureate students must complete all Professional Education courses and other degree/certification requirements for either elementary or secondary students as published in the Bulletin.

4. The Teacher Education and Professional Development Department (TEPD) will submit a list of the names of all students applying for student teaching the following semester to each student’s major and minor department for approval or denial.

5. The EHS Center for Student Services will audit the BSed degree of all students to certify that candidates have met all the requirements before confirming them for certification.

Validity of Provisional Certificate

A current Elementary Provisional Certificate is valid for teaching all subjects in grades kindergarten through five, and major and minor fields in grades six through eight (upon completion of the required subject area tests) as specified on the certificate and kindergarten through eight in a self-contained classroom. It is valid for six years and may be renewed for three years, provided the applicant presents six semester hours of credit in a planned program when earned after the issuance of the initial certificate and within three years of the application date of the first renewal. A second three-year renewal may be granted provided the applicant presents six semester hours of credit in a planned program as approved by the university when earned after the issuance of the first provisional renewal and within three years of the second renewal date.

A current Secondary Provisional Certificate is valid in subject matter fields in grades six through twelve in which the applicant has completed a major(s) or minor(s) as specified on the certificate. It is valid for six years and may be renewed for three years provided that the applicant presents six semester hours of credit in a planned program when earned after the issuance of the initial certificate and within three years of the application date of the first renewal. A second three-year renewal may be granted provided the applicant presents six semester hours of credit in a planned program as approved by the university when earned after the issuance of the first provisional renewal and within three years of the second renewal date.

Requirements for Professional Education Certification

Professional Education Certificate: The Elementary or Secondary Professional Education Certificate may be issued to a candidate who has met the following requirements:

1. Has submitted the appropriate application to www.michigan.gov/moecs.

2. Has taught successfully for three years, according to the validity of his or her provisional certificate.

3. Has presented evidence that he or she has completed six semester hours in a planned course of study beyond the issuance date of the most recent provisional renewal and within five years of application date of the professional certificate.

4. Elementary applicants for the Professional Education Certificate must have completed six semester credit hours of reading methods, and secondary applicants must have completed three semester credit hours of reading methods; and three semester credit hours in the diagnosis and remediation of reading disabilities and differentiated instruction which includes a field experience. Beginning July 1, 2009, all teachers progressing from a Provisional to the Professional Education Certificate must have completed 3 semester credit hours of reading diagnostic and remediation coursework in accordance with Michigan Revised School Code MCL 380.1531(4). At this time, Central Michigan University has established EDU 603 (Elementary Assessment in Reading) and EDU 606 (Secondary Assessment in Reading) to meet this requirement.

Procedures for Professional Education Certification

The Candidate Shall:

1. Submit a planned program of study beyond the bachelor’s degree to www.michigan.gov/moecs when the last of the requirements have been met.


3. Return a copy of the provisional certificate.


Professional Education Certificate Renewal

1. Apply for a professional certificate renewal at www.michigan.gov/moecs.

2. A Professional Education Certificate is valid for 5 years and shall be renewed at the end of the 5-year period for an additional 5 years upon the applicant’s completion of 6 semester hours of academic credit from an approved teacher preparation institution, or the submission of evidence of the equivalent in continuing education units completed through professional development programs or professional activities defined and approved by the State Board. Submission is made to the Michigan Department of Education.

3. For persons who do not complete the requirements of subrule (1) of this rule, the certificate expires on June 30 of the year of the certificate’s expiration.

4. To reinstate an expired Professional Education Certificate, a person shall apply to www.michigan.gov/moecs for a reinstatement and shall present evidence of the completion of the 6 semester hours, or their equivalent, in approved professional development programs or approved professional activities specified in subrule (1) of this rule.

5. Credit completed out of state shall be in an approved teacher education institution and approved by the Michigan State Board of Education prior to enrolling in a course.

Certificate Fee

Public Act 339 of 1988 requires the collection of a certification fee paid when billed by the Michigan Department of Education.
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 his or her 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, Framework, 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 Dean of the College 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, with the exception of research misconduct or violation of academic integrity by a graduate student, which are delegated to the Dean of the College of Graduate Studies. All misconduct of students, except that governed by the Dean of the College of Graduate Studies, 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 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, 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. Only where the health and safety of members of this community, are clearly involved shall the special authority of the university be asserted in other cases.

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 his/her 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 disrupt 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 him or herself, 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.

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 and 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 access to 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) 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 his/her 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 Student Organization Operational Guide 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 he or she 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 he or she 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

4.1.8 Disciplinary Probation: Subject 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

(Continued)
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 person himself/herself, 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 him or her 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
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 of 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 If the charge is against a graduate student for a violation of the Policy on Academic Integrity, then the matter will be handled under Section 6.
5.1.7 Student Admits Violation

5.1.7.1 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.

5.1.7.2 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.

5.1.8 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:

5.1.8.1 The student denies the charge and the Conduct Proceedings Officer determines the matter may be reason for discipline.

5.1.8.2 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.

5.1.9 Alternative Resolution

5.1.9.1 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.

5.1.9.2 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.

5.1.9.3 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.

5.1.9.4 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 issue(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 Procedures.

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 Procedures.

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.

(Continued)
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 In cases involving sexual assault, the complainant has the right not to have his or her irrelevant past sexual history discussed during the hearing.

5.3.7 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 5.1.7.2 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 his or her 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 Rights and Responsibilities.

6. Student Hearing Procedures for Graduate Students Charged with Violating the Policy on Academic Integrity

If the charge is against a graduate student for violation of the Policy on Academic Integrity, then the matter will be handled under this section and not under section 5. If the charge is against an undergraduate student for a violation of the Policy on Academic Integrity, the procedures in the Policy on Academic Integrity shall be followed.

6.1 Intake Conduct Proceedings Officer

6.1.1 A charge may be made to the Dean of the College of Graduate Studies by any member of the university community stating that a student has violated Section 3.2.1 of Specific Regulations Concerning Student Conduct.

6.1.2 One or more Conduct Proceedings Officers shall be appointed by the Dean of the College of Graduate Studies and must participate in the appropriate training sessions regarding the Code of Conduct. The Conduct Proceedings Officer will make, or cause to be made, an investigation of the charge.

6.1.3 If, from the investigation, the Conduct Proceedings Officer determines the matter may be subject to discipline under the policy on academic integrity, 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 Dean of the College of Graduate Studies or designee will set up a hearing.

6.1.4 The student may bring an advisor of the student’s choice to the discussion with the Conduct Proceedings Officer.

6.1.5 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.

6.1.6 Student Admits Violation

6.1.6.1 If the student admits to the violation, the Conduct Proceedings Officer may:

a) Issue a sanction or,

b) Order that the sanction be set by a university Hearing Officer or,

c) Refer the student for Academic Integrity counseling and contract

6.1.6.2 The student charged or the person or group who first brought the charge, or the university, may appeal the sanction, by a letter delivered to the Dean of the College of Graduate Studies within five (5) business days after the Dean has set the sanction. Since admission of the violation by the student is a prerequisite to the Dean 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.

6.1.7 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:
6.1.8 Alternative Resolution
6.1.8.1 Mutual Settlement. In lieu of referral to a hearing, the Conduct Proceedings Officer may offer or accept mutual settlements of any charged violations under this code. Settlements shall be in writing stating 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.

6.2 Hearings
There are two hearing forums: The Graduate Studies Hearing Officer and the Graduate Studies Hearing Body. 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 a Graduate Studies Hearing Officer or Graduate Studies Hearing Body will hear the case. The student will be notified of the time and date of the hearing.

6.2.1 Graduate Studies Hearing Officer
6.2.1.1 One or more Graduate Studies Hearing Officers will be appointed by the Dean of the College of Graduate Studies to hear the case.
6.2.1.2 The Graduate Studies Hearing Officer, based on the evidence presented at the hearing, determines whether the student charged violated the policy on academic integrity and sets the sanction, when applicable.

6.2.2 Graduate Studies Hearing Body
6.2.2.1 The Graduate Studies Hearing Body consists of one Graduate Studies Hearing Officer, one graduate faculty member and one graduate student.
6.2.2.2 The graduate faculty member and the graduate student will be selected by the Dean of the College of Graduate Studies.
6.2.2.3 The Graduate Studies Hearing Body, based on the evidence presented at the hearing, determines whether the student charged violated student conduct regulations, and sets the sanction, when applicable.

6.2.3 Hearing Procedures
6.2.3.1 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.
6.2.3.2 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.
6.2.3.3 A record of the hearing, made by tape recorder, 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.
6.2.3.4 A Graduate Studies Hearing Officer presides at all hearings.
6.2.3.5 Hearing notification and procedures will be communicated to the student charged at least twenty-four (24) hours before the hearing.
6.2.3.6 The Graduate Studies Hearing Officer or Graduate Studies 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.
6.2.3.7 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.

6.3 Complainant’s Rights
Central Michigan recognizes that instructors have rights that need to be protected as well as those of the person who is cited.
6.3.1 The complainant has the right to have a person of his or her choice accompany him or her throughout the disciplinary hearing.
6.3.2 The complainant has the right to remain present during the entire proceeding.
6.3.3 The complainant has the right to make an “impact statement” and to suggest an appropriate sanction if the person cited is found in violation.
6.3.4 The complainant has the right to be informed in a timely manner of the outcome of the hearing regarding the findings and the sanction.
6.3.5 The complainant has the right to appeal either the findings or the sanction.

6.4 Appeals
6.4.1 The following matters may be appealed to the Graduate Studies Appeals Board:
6.4.1.1 The decision of a Graduate Studies Hearing Officer or a Graduate Studies Hearing Officer as provided in Section 6.2.
6.4.1.2 The sanction set by the Conduct Proceedings Officer after admission of violation by the student. See Section 6.1.6 for more information regarding this type of appeal.
6.4.2 The Graduate Studies Appeals Board consists of a graduate student appointed by the Chair of the Graduate Council, the Chairperson of the Academic Senate or designee, and the Dean of the College of Graduate Studies or designee.
6.4.3 An appeal to the Graduate Studies Appeals Board may be made by the student involved, by the person or group who first brought the charge, or by the university.
6.4.4 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.
6.4.5 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 which the person appealing is requesting from the Graduate Studies Appeals Board.
6.4.6 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 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.
6.4.7 The Dean of the College of Graduate Studies or designee is responsible for notifying members of the Graduate Studies Appeals Board of the appeal and for setting a time and place for holding a meeting of the Graduate Studies Appeals Board. The Conduct Proceedings Officer will provide notice of time and place of the meeting of the Graduate Studies Appeals Board to the student(s) charged, the charging party, and other university persons deemed appropriate by the Conduct Proceedings Officer.
6.4.8 The Conduct Proceedings Officer will assemble the documentary evidence introduced at the hearing, the record made of the hearing, and the file made in connection with the matter and will make these materials available to the Graduate Studies Appeals Board.

6.4.9 The Graduate Studies 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.

6.4.10 The Graduate Studies Appeals Board makes its determination based solely on the record of the student’s hearing, facts that are presented to the Graduate Studies Appeals Board, and arguments before the Graduate Studies Appeals Board. No additional witnesses, witness statements, or other materials may be introduced during the Appeal.

6.4.11 The purpose of the Graduate Studies Appeals Board is to decide if the findings and/or the sanction of the Graduate Studies Hearing Board were so incorrect that the decision should be changed. It is not the purpose of the Graduate Studies Appeals Board to substitute its judgment for that of the Graduate Studies Hearing Officer or Graduate Studies Hearing Body.

It is not the purpose of the Graduate Studies Appeals Board to decide if it would have reached the same decision had it been the Graduate Studies Hearing Officer or Graduate Studies Hearing Body. It is not the function of the Graduate Studies Appeals Board to re hear the charges against the student; it is an appeal of the findings and/or the sanction of the Graduate Studies Hearing Officer or Graduate Studies Hearing Body. The Graduate Studies 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.

6.4.12 The Graduate Studies 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.

6.4.13 A decision of the Graduate Studies 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 Dean of the College of Graduate Studies. Any student responding to a charge under these procedures, any person bringing charges under these procedures, or the university, may make a written application to the Dean of the College of Graduate Studies to review a decision made by the Appeals Board. The application must be received in the Office of the Dean of the College of Graduate Studies 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 Dean of the College of Graduate Studies. The application for review must contain the following information:

a) Name of the student(s) charged in the proceeding in which the Graduate Studies Appeals Board has rendered a decision.

b) Name, address, and telephone number of the person making application for review.

c) A copy of the Graduate Studies Appeals Board decision involved.

d) A statement as to what portion(s) of the Graduate Studies 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 Dean of the College of Graduate Studies by the person making application for review. If the Dean of the College of Graduate Studies elects to review a decision of the Graduate Studies Appeals Board, either in part or entirely, the Dean of the College of Graduate Studies may establish whatever procedures are deemed appropriate and consistent with fairness to govern the review. The university also 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, Graduate Studies Hearing Officer, Graduate Studies Hearing Body, or others under these procedures.

6.5 Changes in Procedures

6.5.1 The procedures set forth herein shall apply throughout the calendar year. A Graduate Studies Hearing Officer may be appointed by the Dean of the College of Graduate Studies to hear a case at times when a Graduate Studies Hearing Body cannot be readily assembled such as when students are not in attendance at regular sessions, during exam week, summer sessions.

6.5.2 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.

6.6 Clarifying Processes

Clarifying processes that are consistent with the Hearing Procedures in this Section may be proposed by the College of Graduate Studies.
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Corrections and Updates to the Paper Version of the 2015-16 Graduate Bulletin

General:
• Page 46 - Graduate Assistant Benefits - A link has been updated for more information regarding the collective bargaining unit: https://www.cmich.edu/office_provost/academic_administration/FPS/Documents/GSU%20Agreement%202013-16%20Final%20Copy.pdf

Programs:
• Page 72 - M.S. in Information Systems - The Admission Requirements, Retention & Termination Standards have been updated, and the online Bulletin and posted PDF are the official version, replacing the version in the 15-16 paper Graduate Bulletin.
• Page 81 - M.A. in Speech-Language Pathology - The degree published in the paper 15-16 Bulletin has the incorrect amount of total hours, which should be 54 hours. The version to be followed for the 15-16 Bulletin is in the online bulletin and the posted PDF. The degree listed in the 15-16 paper Bulletin, for 62 hours, will be implemented in the 16-17 year.
• Page 102 - Ph.D. in Educational Leadership - Academic Core II was left off the paper version:
  Academic Core II (3 hours)
  Select one of the following:
  EDL 752 - Social Justice in Global Studies Education 1-12(Spec)
  EDL 816 - Social Justice in Education 3(3-0)
• Page 121 - Doctor of Health Administration - In the third paragraph, the following sentence was corrected to read, "No transfer credits will be accepted to meet the dissertation requirement nor DHA 714 or DHA 726."
• Page 135 - Graduate Certificate in Gerontology - This program is on hiatus.
• Page 154 - Master of Arts in Sport Administration - The following paragraph was added: This degree is accredited by the Commission on Sport Management Accreditation (COSMA).
• Page 192 - MSA in General Administration - The Heading for General Administration Concentration Areas should say 15-18 hours (not 12-18). This does not affect the total hours.

Course Descriptions:
• The following course was omitted from the Graduate Bulletin due to a programming error:
  MUS 518 Song Repertoire  2(1-2)
  A survey of art song repertoire. Prerequisites: Music Candidacy or admission to the graduate music program.

NOTE: Please check back as there may corrections noted from time to time as they are discovered.

06/16/2016

The Editor regrets any inconvenience to faculty, staff and students caused by errors to the paper bulletin. If you have any concerns, please call 989-774-1590 or mcgui1lg@cmich.edu.

The purpose of this bulletin is to provide information about CMU's academic programs available in the 2015-16 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.

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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