The purpose of this bulletin is to provide information about CMU's academic programs available in the 2014-15 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.
Summer Sessions

First Session (Six Weeks)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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<tbody>
<tr>
<td>Classes Begin</td>
<td>May 19</td>
<td>May 18</td>
<td>May 16</td>
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<tr>
<td>Registration - Drop/Add Ends</td>
<td>May 20</td>
<td>May 19</td>
<td>May 17</td>
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<tr>
<td>Memorial Day Recess</td>
<td>May 26</td>
<td>May 25</td>
<td>May 30</td>
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<tr>
<td>Classes End</td>
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<td>June 25</td>
<td>June 23</td>
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Second Session (Six Weeks)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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<tbody>
<tr>
<td>Classes Begin</td>
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<td>June 27</td>
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<tr>
<td>Independence Day Recess</td>
<td>July 4</td>
<td>July 3</td>
<td>July 4</td>
</tr>
<tr>
<td>Classes End</td>
<td>Aug. 7</td>
<td>Aug. 6</td>
<td>Aug. 4</td>
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<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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<tr>
<td>Classes Begin</td>
<td>Aug. 25</td>
<td>Aug. 31</td>
<td>Aug. 29</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>
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<tr>
<td>Thanksgiving Recess</td>
<td>Nov. 26-Dec. 1</td>
<td>Nov. 25-30</td>
<td>Nov. 23-28</td>
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<tr>
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<td>Dec. 12</td>
<td>Dec. 10</td>
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<tr>
<td>Examination Week</td>
<td>Dec. 8-12</td>
<td>Dec. 14-18</td>
<td>Dec. 12-16</td>
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<tr>
<td>Semester Ends</td>
<td>Dec. 13</td>
<td>Dec. 19</td>
<td>Dec. 17</td>
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<tr>
<td>Commencement</td>
<td>Dec. 13</td>
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<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tr>
<td>Classes Begin</td>
<td>Jan. 12</td>
<td>Jan. 11</td>
<td>Jan. 9</td>
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<td>Registration-Drop/Add Ends</td>
<td>Jan. 16</td>
<td>Jan 15</td>
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<tr>
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<td>Jan. 18</td>
<td>Jan. 16</td>
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<tr>
<td>Spring Recess</td>
<td>March 7-16</td>
<td>March 5-14</td>
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<td>May 4-8</td>
<td>May 2-6</td>
<td>May 1-5</td>
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<tr>
<td>Semester Ends</td>
<td>May 9</td>
<td>May 7</td>
<td>May 6</td>
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<tr>
<td>Commencement</td>
<td>May 9</td>
<td>May 7</td>
<td>May 6</td>
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No Classes April 30-May 1 March 31 & April 1 March 30-31
Classes End May 2 April 30 April 29
Examination Week May 4-8 May 2-6 May 1-5
Semester Ends May 9 May 7 May 6
Commencement May 9 May 7 May 6

See www.cmich.edu/registrar_office/RegistrarCalendars for updates to the calendar.
Board of Trustees

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Mr. John D. Hurd, Petoskey
Mr. William R. Kanine, Petoskey
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Ms. Sarah R. Opperman, Midland
Mr. Robert F. Wardrop II, Grand Rapids
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Term Expires December 31,

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Roger L. Coles (1973) Interim Dean, College of Graduate Studies; B.A., Western Washington State College; M.A., Ed.S., Central Michigan University; Ed.D., Columbia Pacific University
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Claudia B. Douglass (1976) Interim Vice Provost for Academic Affairs; B.S., M.A.T., Indiana University; Ph.D., Purdue University
Carolyn Dunn, 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.S., 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 Lynne Hella (1996) Associate Vice President/Human Resources; B.A., Alma College; M.S.A., Central Michigan University
SheLLy S. Hinck (1988), Interim Dean, College of Communication and Fine Arts; B.A., Millikin University; M.A., Southwest Texas State University; Ph.D., University of Texas
Christopher D. Ingersoll (2009) Dean, The Herbert H. and Grace A. Dow College of Health Professions; B.S., Marietta College; M.A., Indiana State University; Ph.D., University of Toledo
Steven L. Johnson (2012) Vice President for Enrollment and Student Services; A.B., Davenport University; B.A., Davenport University; M.A., Eastern Michigan University; M.L.E.D., Harvard University
Sherry S. Knight (2012) Associate Vice President of University Communications; B.A.A., Central Michigan University
John J. McGrath (2012) Vice President, Research and Sponsored Programs; B.S., Stanford University; M.S., Ph.D., Massachusetts Institute of Technology
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
Linda C. Perkowski (2011) Interim Dean, College of Medicine; B.A., University of Texas; M.S. Texas A & M University; Ph.D., University of Texas
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
Anthony A. Voisin (1985) Assistant 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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![Tobacco-Free Campus](image)
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Central Michigan University

From the President...

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

CMU’s No. 1 strategic priority is student success. I often say that at the end of the day, CMU graduates leaders.

CMU is among the nation’s 100 largest institutions of higher learning. It is a student-centered university that offers you a superior learning environment to prepare you for meaningful involvement and professional accomplishment in today’s knowledge-based and global society.

Founded in 1892, CMU has remained steadfast in its mission of academic, personal and professional success for our students. CMU is committed to fortifying its legacy programs— with excellence in teacher education, business and the liberal arts— while at the same time taking the lead in increasingly important areas including health care, science, technology, engineering and mathematics.

You can choose from an impressive breadth of more than 200 academic programs, including many that are nationally recognized. CMU’s online undergraduate classes recently were ranked No. 1 by U.S. News and World Report and our peers across America, in part because of remarkable student engagement and faculty responsiveness. CMU also has established a College of Medicine, which opened in 2013 and is committed to producing high-quality physicians for underserved rural and urban communities in the U.S. Midwest region, particularly in central and northern Michigan.

No matter which program you choose, you will learn from accomplished professors dedicated to teaching and committed to engaging you directly in opportunities for hands-on learning, applied research and other enrichment experiences.

To support your experiences beyond the classroom, our faculty, staff and advisors form partnerships to provide you with internship or professional development opportunities, guide your academic choices and much more. As you continue your educational program, you soon will join the proud community of more than 220,000 CMU alumni worldwide.

Education has the power to transform lives, communities, nations and the world. On behalf of the entire university community, we welcome you and encourage you to actively engage in your academic career at CMU.

Best regards,

George E. Ross, Ph.D.
President
From the Dean...

Each year, we are pleased to welcome both new and returning students to Central Michigan University to pursue your graduate studies. We are particularly pleased that you chose CMU for your studies. Graduate education is essential to maintaining our country’s leadership in research innovation. Your studies here ensure that as knowledge creators and innovators of tomorrow, you will have the cultural awareness, skills, and expertise to compete effectively in a knowledge-based global economy. You are now embarking on a new journey.

Our system of higher education is arguably the best in the world, and graduate education is its bedrock. Attracting top domestic and international students to our nation’s graduate programs is imperative. President Obama made the connection between a robust educational system and American economic strength and security, and he stressed the need to increase access and affordability of high quality education at all levels. Education must play a key role in our national strategy to enhance our competitiveness in the global economy.

The Bureau of Labor Statistics estimates that by 2018, more jobs will require people with advanced degrees, specifically an 18% increase in jobs requiring a MA and a 17% increase in those requiring a Doctoral degree.

Graduate education is meant to be different from undergraduate education. If you enjoy reading, problem-solving, discovering new facts and exploring new ideas then graduate education maybe right for you, but to be successful you must be self-directed, intellectually curious, hard-working, flexible, and committed. You will have a closer relationship with faculty than you had as an undergraduate, and you will rely on your fellow students for ideas, criticism, and stimulation. Graduate education is essential to maintaining our country’s leadership in research and innovation. At the graduate level, the field of study is narrow, the expectations for both teacher and learner are great, and, in many cases, there is an opportunity to do in-depth research and work independently. These aspects of graduate education make it a challenge for many.

Make the most of your graduate experience by utilizing the many resources available to you. There are many opportunities, on- and off-campus, to get involved in meaningful activities outside the classroom. Funding is available to assist you with research and creative projects and for travel. The Graduate College will be offering an enrichment series to help meet some of your needs that are not directly connected to your academic pursuits. Oftentimes, departments and programs have special activities to broaden your experience in your area of study. Do not limit yourselves to the classroom or the lab.

We are here to assist you and the graduate dean continually advocates for excellence regarding every aspect of the graduate enterprise. If you need to speak with us regarding aspects of graduate education such as your graduate assistantship, plan of study, or thesis or dissertation, please do not hesitate to make an appointment. Also, you can find a great deal of information and any form related to CMU graduate education you might need on our website: www.grad.cmich.edu. And finally, let us know if CMU is not meeting your needs as a graduate student. We are always willing to consider new offerings to our graduate students; we just need to know what you need! The highly skilled creative workforce of tomorrow is developed through your graduate programs.

Again, we are most pleased that you have chosen CMU for your graduate studies. We believe you will find your graduate work here at CMU challenging and rewarding.

Interim Dean, College of Graduate Studies
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 dean of the college has a variety of duties including: continually advocating for excellence regarding every aspect of the graduate enterprise, reviewing existing programs, encouraging the development of new programs, promoting and supporting graduate student research and creative endeavors, increasing support for graduate programs and graduate students, building and maintaining the institutional infrastructure for graduate education, and enforcing university policies regarding graduate education.

The staff of the College of Graduate Studies is available to answer questions or help current and prospective graduate students with any problems they may have. In addition, if you have general questions concerning graduate studies at CMU, the Office of the Dean or the Graduate Student Services staff 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
grad@cmich.edu

Office of the Dean  Graduate Student Services
Foust 104  Foust 100
989-774-4890  989-774-4723

College of Graduate Studies Mission Statement

The mission of the College of Graduate Studies is to support and advance high-quality graduate education. Toward this end, the College

- promotes quality in all aspects of graduate education; encourages the development of new programs and the improvement of existing ones;
- provides administrative support for graduate programs;
- promotes the recruitment and retention of a well qualified and diverse student body;
- develops graduate policies for consideration by the larger CMU community;
- enforces approved policies that relate to graduate programs and graduate students;
- advocates for financial and non-financial support for graduate students.

In accomplishing its mission, the College of Graduate Studies responds promptly and professionally to all of its constituents, including current and prospective students, alumni, graduate faculty, academic departments and programs, and employers.
College of Graduate Studies Administration

The Graduate Committee represents the graduate faculty and is charged with making recommendations to the Academic Senate concerning degrees, programs, standards, and policies of the College of Graduate Studies. The Dean of the College of Graduate Studies is the agent of the graduate faculty for the implementation and enforcement of college policies for both main campus and Global Campus graduate programs.

The Graduate Committee is a committee of the Academic Senate, charged to serve as the advisory and policy-making body for the College of Graduate Studies. The Council is concerned with the development and evaluation of all programs and policies pertaining to the operation of the College of Graduate Studies and the quality of graduate education on CMU’s main campus and through Global Campus. The Graduate Committee makes recommendations to the Academic Senate in the following areas: new programs, program additions, modifications, consolidations, and deletions; minimum graduation requirements and approved department requirements for graduate programs; College of Graduate Studies’ admission and dismissal policies and approved departmental policies; and policies and regulations for the College of Graduate Studies. Among its responsibilities, the Graduate Committee is expected to: establish the guidelines for advising graduate students, establish guidelines for the Graduate Research Fellowship Program; and evaluate courses numbered 500 and above.

Faculty serving on the Graduate Committee must be members of the Graduate Faculty. Nominations for the Graduate Committee are forwarded to the Academic Senate from the Committee on Committees. The Council includes one faculty from each of the following: the College of Business Administration, the College of Education and Human Services, the College of Communication & Fine Arts, The Herbert H. and Grace A. Dow College of Health Professions, the College of Humanities and Social & Behavioral Sciences, the College of Science and Technology, and the College of Medicine. There are also five graduate faculty at large and two graduate students on the Graduate Committee. Faculty members serve three-year staggered terms, and graduate students serve one-year terms. A representative of Global Campus serves as an ex officio member of the Graduate Committee. Information regarding the current membership of the Graduate Committee and the names of its officers is available from the College of Graduate Studies or the Academic Senate Office.

Campus Visits

The College of Graduate Studies welcomes visits from prospective students and their families to Mount Pleasant and the CMU community. The College of Graduate Studies can provide campus maps and information. Students are encouraged to call departments before their visit and set up appointments to meet with 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 2014-2015 Graduate 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.
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 7,300 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. 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. One of its most noted service efforts is the Alternative Break program, which ranks fourth nationally for the number of student participants.
- Four CMU professors have been named Carnegie Foundation for the Advancement of Teaching Michigan Professor of the Year, tied for the most of any university in the state.
- CMU is the nation’s foremost university authorizer of charter public schools with 64 schools educating more than 31,000 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.
- Twelve new academic, athletic and residential buildings have been built on CMU’s campus in the last 12 years, including the Events Center, which opened in December 2010; the College of Medicine Building that opened in September 2012; and the new Graduate Housing Complex, which opened in July 2013.

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 lacrosse over the next two years. 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 Chippewas are regular contenders for the MAC Institutional Academic Achievement Award for the highest GPA. The Chippewas’ 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. CMU’s summer sports camps also are recognized among the best in Michigan.

Charles V. Park Library. Central Michigan University recently celebrated the 10th anniversary of Park Library’s expansion and renovation - a project that converted the library from a storehouse for printed academic materials to a comprehensive, highly technological information center. CMU’s 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.

Tours of campus are available weekdays and many Saturdays and are arranged through the Admissions Office. Call 989-774-3076 or 888-292-5366.
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 NCA 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: A Commission of North Central Association and is located at 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1411.

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: Engineering Accreditation Commission of ABET (http://www.abet.org); Association of Technology, Management and Applied Engineering; Association of University Programs in Health Administration; American Psychological Association; Council of Academic Accreditation in Audiology and Speech-Language Pathology; Accreditation Commission for Audiology Education; American Chemical Society; Commission on Accreditation of Athletic Training Education; Accreditation Council for Education in Nutrition and Dietetics; Accreditation Review Commission on Education for the Physician Assistant, Inc. (for more information, see the pre-Physician Assistant studies); Accrediting Council of Education in Journalism and Mass Communication; Commission on Accreditation in Physical Therapy Education; Council on Academic Accreditation in Audiology and Speech-Language Pathology; Council for Interior Design Accreditation; Council on Social Work Education; Liaison Committee on Medical Education, National Association for the Education of Young Children; National Association of Schools of Art and Design; National Association of School Psychologists; National Association of Schools of Music; National Association of Schools of Public Affairs and Administration; National Council on Family Relations; Council on Accreditation of Parks, Recreation, Tourism, and Related Professions; and National Environmental Health Science and Protection Accreditation Council. 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.

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/aao).

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

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. The OID recognizes preparing students for productive lives within today’s multicultural society. Our global community necessitates providing ALL students opportunities to experience and cultivate an appreciation for perspectives, customs, and beliefs different from their own. The OID mission is to support this endeavor. 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. Also, the OID monitors progress of CMU’s 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 view the exhibits.

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 undergraduates. 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 108B; 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.

(Continued)
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.
Dianne De Salvo, Director
Ronan Hall 330; 989-774-4308;
www.studyabroad.cmich.edu

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.

CMU is offering a growing number of faculty-led short-term programs around the world. Other short-term programs around the world are also available in summer. Semester and academic year options are also available. 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 for studying abroad; students may take courses taught in English around the world. 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 main campus 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.

Meet with a Study Abroad Advisor in OSA, Ronan 330, to discuss the opportunities available to study abroad through CMU.
Doctoral Degrees
- Audiology
- Earth and Ecosystem Science
- Education: Educational Leadership (Ed.D.)
- Educational Leadership (Ph.D.)
- Educational Technology (pending HLC approval)
- 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
- Biology
- Broadcast and Cinematic Arts
- Business Administration (MBA)
- Chemistry
- Chemistry, Teaching
- Communication
- Computer Science
- Counseling
- Cultural Resource Management
- Early Childhood Education
- Economics
- Education*
- Educational Technology
- Elementary Education
- English Language and Literature
- English: Composition and Communication
- Exercise Physiology
- Geographic Information Sciences
- Higher Education Administration
- History
- History, Joint
- Humanities
- Industrial Management and Technology
- Information Systems
- Integrated Science, Teaching
- Mathematics
- Music
- Neuroscience
- Nutrition & Dietetics
- Physician Assistant
- Physics
- Political Science
- Psychology, Experimental
- Psychology, Industrial/Organizational
- Public Administration
- Reading and Literacy (K-12)
- Recreation and Park Administration
- School Principalship
- Secondary Education
- 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) Only for Global Campus students majoring in Integrated Leadership Studies)*
- Apparel Product Development and Merchandising Technology
- Business (MBA) - Accounting Emphasis
- Computer Science
- Economics
- Geographic Information Sciences
- History
- Mathematics
- Political Science
- Psychology, Experimental
- Spanish

Graduate Certificates
- Acquisitions Administration
- Autism
- 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*
- Long-Term Care
- 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
- Vehicle Design and Manufacturing*

*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 CMU students, faculty, and staff. Its collections contain more than 1,000,000 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 accessible 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.

More than just a collection of materials, the University Library provides a wide array of library 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 students, faculty, and staff 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 in the library, at the entrances, and online at https://www.cmich.edu/library/hours/. Users also may call 989-774-3294 to hear the current library hours. For more information about the library, 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-Americanica. 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.
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 additional information, contact the Telecom Service Center at 989-774-3087, or visit http://it.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 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.

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

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

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 policies and procedures, such as absence from class due to illness lasting a week or more.

Student Activities and Organizations

Central Michigan University 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 social and educational programs or events for residents of a respective hall.

The Student Government Association (SGA) is recognized as the representative governing body for CMU students. By becoming active in SGA, any student can 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.

The Student Organization Center (SOC), 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 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

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 pro-active 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, a counselor in the Counseling Center, or SAPA (Sexual Aggression Peer Advocates). For more information, see www.cmich.edu/about/leadership/officeprovost/dean/SAPA.

Student Ombuds Office
ombuds@cmich.edu

The Student Ombuds Office is part of the President’s Office and is a place for student voices to be heard. When your problem does not have a simple solution, it can be difficult finding someone who can help. Most of the time, your problem can be handled through normal academic or administrative channels. Academic advisers, 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/office_president/ombuds/default.aspx.

Student Disability Services

Central Michigan University is committed to providing equal opportunities for access 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.

Career Services

Career Services [https://centrallink.cmich.edu/services/student_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, vacancy listings from a variety of sources, and information about potential employers in business, government, and education.

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 through eRecruiting.

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.

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/.

Health and Wellness

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: Conveniently located on campus in Foust Hall at the corner of Preston Street and East Campus Drive, University Health Services 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. Additional parking is 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: University Health Services has two convenient 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

General Information 19

(continued)
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. RA's, 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. Anational health insurance provider offers and administers a health insurance plan for CMU students, their spouses and dependents at a very competitive cost. Information, contact 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.

**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 report 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 can 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.

**Additional Information:** For additional information about University Health Services visit the UHS website at www.healthservices.cmich.edu.

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**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 noon and 1:00 to 5:00 p.m., Monday through Friday when the university is open. 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 (989-774-4928)**
- **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.
Human Development Clinic

The Human Development Clinic 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 Human Development Clinic provides counseling and consultative services during the summer months. The Human Development Clinic 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: www.cmich.edu/academics/sci_tech/physics.

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, CMUBS owns 310 acres elsewhere on the island that serve a variety of field courses offered at the station by providing highly diverse sites for field trips, research and other activities. CMU also owns the completely renovated former Coast Guard boathouse, located on Whiskey Point in St. James at the north end of the island, which houses research vessels and a state-of-the-art experimental mesocosm facility.

Students reside in either dormitories or rustic cabins in the modern CMU campground, eat in the cafeteria and relax and study in the spacious Matt and Ellie Hohn main lodge. Its location among a variety of natural habitats makes CMUBS an ideal location for a biological station. For more information, contact cmubs@cmich.edu or see www.cmich.edu/academics/sci_tech/cmubs/.

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, 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 3 p.m. For a schedule of exhibitions, please see www.cmich.edu/academics/comm_finearts/CCFArtGallery.

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 Media Board of Directors

The Student Media Board of Directors, composed of students and professional journalists, appoints editors, formulates policies and provides direction for the two publications, Central Michigan Life and The Central Review. For additional information write or visit Room 436, Moore Hall, or call 989-774-3493.

- Central Michigan Life is the official university student newspaper published three times a week while the university is in session. It is student-written and provides practical experience for journalism students. It covers campus events and major city, state, and national news. The online version is on www.cm-life.com.
- The Central Review is the official university literary magazine. It is published once each semester.

Cocurricular Electronic Media

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

University Recreation (UREc)

University Recreation (UREc) manages the Student Activity Center (SAC), the Outdoor Sports Complex, the outdoor tennis courts, two satellite fitness facilities in the Towers and East Area residence halls and an 18-Hole Championship Disc Golf Course.

The SAC is 180,000 square feet of recreation space and has hosted more than 13 million visitors since it opened in 1990. With a spacious and dynamic environment, the SAC provides fitness and recreation programming meeting the needs of our diverse student population. URec is dedicated to providing outstanding recreation, leisure and wellness programs, services and facilities for our students, members and guests in a safe environment that promotes healthy lifestyles, values diversity, and contributes to co-curricular learning and leadership opportunities.

Facilities are provided for aquatics, fitness and weight training, group fitness, racquetball courts, an Injury Care Center, and sports forums for basketball, volleyball, and CMU’s 18 hole Disc Golf course. In addition, URec offers comprehensive fitness programs designed to meet all fitness levels and wellness interests. URec offers over thirty group fitness classes and personal trainers are available to provide assessments, goal-setting and specialized programs. Learn to Swim programs (USwim) are available throughout the year. The SAC manages two pools, one in the SAC and one in the Rose Center.

The Intramural Sports program offers more than thirty leagues with something for everyone, from one-day special events to semester long individual and team sports. Activities are offered in three divisions: men, women, and co-recreational. Club Sports compete at an extramural level with over thirty sports offered, providing an excellent opportunity to practice leadership, organization and teaching skills.

UREc offers a wide variety of employment opportunities, employing over 300 students during the academic year.

Special events are held in the SAC, including Special Olympics Michigan, Alumni events, SIBS weekend, CMU Up All Night and Leadership Safari. We are a premier recreation provider with a national reputation for excellence. For more information about URec programs and facilities, contact University Recreation at 989-774-3686 or see http://www.cmich.edu/about/leadership/finance_admin_services/University_Recreation/Pages/default.aspx.

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, student supplies, CMU clothing, and gift items; Independent Bank; MEDIgraphix, 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, Big Apple Bagles, 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_facilities/services/printing

Residence Life and Campus Dining

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.

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 Governmental 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

Central Michigan University 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. Central Michigan University 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; WCMC-FM (91.7 MHz) from Alpena; WCMJ-FM (96.9) from Standish; WUXC-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 24 hours a day, 365 days a year, providing programming of an informational and cultural nature. The broadcast schedule includes NPR news, and classical music, 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. CMU Public Broadcasting is located in the Public Broadcasting Center on the corner of Mission and Broomfield.
University Communications
West Hall 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.

The Office of Research and Sponsored Programs

The Office of Research and Sponsored Programs (ORSP) supports research and creative activities by faculty, staff, and students. Faculty and staff research is supported through the Early Career Investigator Award, New Research Initiative Award, Creative and Scholarly Support Award, Research Incentive Award, Proposal Match, Vice Provost’s Discretionary Fund, and grants through the Faculty Research and Creative Endeavors program. Programs to support undergraduate student research are the Summer Scholars Program, Research and Creative Endeavors Grants, and Presentation Grants. ORSP organizes the annual Student Research and Creative Endeavors Exhibition held near the end of each academic year and the Faculty Excellence Exhibition held each March. In addition, the office provides a number of workshops regarding internal and external research funding and research conduct issues, and provides oversight and function for all phases of the research process.

For additional information on the programs or services, contact the Office of Research and Sponsored Programs at 989-774-ORSP or see http://www.cmich.edu/libraries_research/orsp/Pages/ORSP.aspx.
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/gradmed. The admission office email address is cmmedadmit@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. NOTE: Applicants who apply via the paper application should contact the College of Graduate Studies for the fee amount.
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 a regionally accredited U.S. college or equivalent degree from a regionally accredited U.S. college or university (accredited at the time the student attended). Students seeking policy exceptions should consult the College of Graduate Studies, Office of the Dean.
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. All admission files for degree or certificate-granting programs are sent by the College of Graduate Studies to the appropriate departments for review. Once a department evaluates the student’s application file and determines an admission decision, the department forwards its admission recommendation to the College of Graduate Studies. Using the department’s admission or denial recommendation, the College of Graduate Studies either denies admission or grants admission.

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 the College of Graduate Studies, Graduate Student Services Office (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 can 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”.)
Certificate of Admission

The College of Graduate Studies alone determines non-degree admission. Admission to a degree or certificate granting program is always contingent upon departmental approval. Only the College of Graduate Studies has the authority to admit graduate students. Department and programs recommend admission or denial. The College of Graduate Studies issues the final decision. Using the department’s admission or denial recommendation, the College of 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.)

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 optionally, 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 can 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 College of 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. Submit a completed Admission Status Reclassification Petition form with required signatures to the College of Graduate Studies,

c. Submit 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 pre-requisites.
- 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 College of 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.

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<tr>
<th>Program</th>
<th>Application Deadline</th>
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<td>Audiology</td>
<td>January 15</td>
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<td>Communication</td>
<td>Spring Semester: October 15 Fall Semester: March 15</td>
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<tr>
<td>Educational Leadership (DET)</td>
<td>January 15 March 1 until full</td>
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<tr>
<td>Health Administration (DHA) Global Campus Only</td>
<td>April 11</td>
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<td>History:</td>
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<td>Joint M.A./Ph.D.</td>
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<tr>
<td>Traditional M.A.</td>
<td>Spring: November 1 Fall: July 15</td>
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<td>Mathematics</td>
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<td>Neuroscience</td>
<td>March 1</td>
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<td>School</td>
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<td>Science of Advanced Materials</td>
<td>Summer Session II: Feb. 1</td>
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<tr>
<td>Speech-Language Pathology</td>
<td>January 15</td>
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</table>
**Re-evaluation for Regular or Conditional Admission.** The time frame varies for non-degree students that 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 College of Graduate Studies. “Undecided” students who do not have coursework deficiencies may apply for admission to a degree or certificate program at any time. Non-degree students that 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 the College of Graduate Studies. 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 the College of Graduate Studies 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 the College of Graduate Studies. 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, optionally, 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 the College of 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 will 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 enrollment status prior to student teaching if they meet conditions 4 and 6 above. Exceptions to the policy can 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 Dean of the College of 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 the College of Graduate Studies 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 directly to the College of Graduate Studies 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 provided 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 College of 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.

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3. English Proficiency Standards:
   a. Test of English as a Foreign Language (TOEFL): A score of 500 on the Paper-Based Test (PBT) or 174 on the Internet-Based Test (IBT) is required for conditional admission or 550 PBT/213 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.
   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 who have satisfactorily completed a baccalaureate degree where 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, Exempt Countries 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 can 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 or administrator (PA) 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 or administrator (PA) 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 in the College of Graduate Studies. A faculty member or administrator who is admitted to a degree or certificate program that is outside his/her own college must provide written permission from the Dean of the College of 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 Dean of the College of Graduate Studies or, optionally, non-degree admission at the discretion of the dean. Such an admissions 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. 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 graduate level and may not be enrolled in more than 15 credit hours (UG and graduate level combined) per semester. Not all programs offer the Accelerated Master's Degree Program: a master's degree granting program must be approved through the curricular process, to offer an Accelerated Master's Degree. Check the College of 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 admittance 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 an "A" 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 AMDP. 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 the College of 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 course work 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, where 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 can request a leave of absence by submitting a Leave of Absence Request form to the Dean of the College of 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 the College of 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 the College of 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 the College of 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 College of Graduate Studies website [www.grad.cmich.edu](http://www.grad.cmich.edu) under New and Current Students: Applications and Academic Forms.

Admission to the College of 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 the College of 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 the College of 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. Effective in 1991, the College of Graduate Studies retains original application materials for 7 years (unless the degree or certificate is awarded), so transcripts that were submitted with the original application do not need to be resubmitted. If a student became inactive prior to 1991, check with the College of Graduate Studies to determine whether transcripts must be submitted from other universities.

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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.

**Academic Load**

The College of 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 College of Graduate Studies Dean.

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 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 the College of Graduate Studies. 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 form or Certificate Program form.

**Recomputing Grade Point Average**

Students who transfer from one graduate program to another may file a Recomputation of Grade Point Average Petition. If approved by the advisor, department chair, and Dean of the College of Graduate Studies 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 students 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.

**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.

**Student Photo Identification Card (Campus ID)**

Once you have initially registered for courses at Central Michigan University you 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/doctrinal project/dissertation credits until the Prospectus and committee composition have been approved at the department level and by the Dean of the College of Graduate Studies. This is to ensure that if the Prospectus is not approved by the Dean of the College of Graduate Studies that the student has not wasted valuable time, credits, and resources. Projects undertaken prior to the Dean of the College of Graduate Studies approving the Prospectus may be denied and the project deemed invalid.
Auditing Courses
If you do not wish to take a graduate course for credit you may register as an auditor, provided you obtain approval from the chairperson of the department prior to registration and are otherwise qualified. To qualify to audit a main campus or Global Campus graduate course you 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 your 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. Your 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 can 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 Assistant Vice President For Student Affairs or designee may refer a student to the Behavior Evaluation Team to assist the student in functioning effectively within the university environment. Referral to the Behavioral Evaluation Team does not preclude removal from the university, or university housing, in accordance with provisions of the Code of Student Rights, Responsibilities and Disciplinary Procedures and/or the Housing Agreement. A student referred to the Behavioral Evaluation Team shall be notified in writing, and shall be provided written information on the procedures to follow.

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 can 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.

3. Information gained in reading or research that is not common professional knowledge must be acknowledged in a parenthetical citation in the text or in a footnote or endnote.

4. This prohibition includes, but is not limited to, the use of papers, reports, projects, and other such materials prepared by someone else.

C. Fabrication, Forgery and Obstruction Definition

Fabrication is the use of invented, counterfeited, altered or forged information in assignments of any type including those activities done in conjunction with academic courses that require students to be involved in out of classroom experiences.

Forgery is the imitating or counterfeiting of images, documents, signatures, and the like.

Obstruction is any behavior that limits the academic opportunities of other students by improperly impeding their work or their access to educational resources.

Clarification

1. Fabricated or forged information may not be used in any laboratory experiment, report of research, or academic exercise. Invention for artistic purposes is 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 academic effort previously submitted for academic credit at this or a different institution.

Multiple submissions shall not include those situations where the prior written approval by the instructor in the current course is given to the student to use a prior academic work or endeavor.
Clarification
1. Students may not normally submit any academic assignment, work, or endeavor in more than one course for academic credit of any sort. This will apply to submissions of the same or substantially the same work in the same semester or in different semesters.
2. Students may not normally submit the same or substantially the same work in two different classes for academic credit even if the work is being graded on different bases in the separate courses (e.g., graded for research effort and content versus grammar and spelling).
3. Students may resubmit a prior academic endeavor if there is substantial new work, research, or other appropriate additional effort. The student shall disclose the use of the prior work to the instructor and receive the instructor’s permission to use it PRIOR to the submission of the current endeavor.
4. Students may submit the same or substantially the same work in two or more courses with the prior written permission of all faculty involved. Instructors will specify the expected academic effort applicable to their courses and the overall endeavor shall reflect the same or additional academic effort as if separate assignments were submitted in each course. Failure by the student to obtain the written permission of each instructor shall be considered a multiple submission.

E. Complicity Definition
Complicity is assisting or attempting to assist another person in any act of academic dishonesty.
Clarification
1. Students may not allow other students to copy from their papers 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 (continued)
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 his/her 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 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 purpose of the appeals committee is to determine whether the instructor abused his or her professional discretion in finding that academic misconduct occurred and/or in the choice of academic consequences for such misconduct. It is not the purpose of the appeals committee to substitute its judgment for that of the instructor. It is not the purpose of the appeals committee to decide whether it would have reached the same decision had it been the instructor. It is not the function of the appeals committee to rehear the charges against the student. The burden of proof shall be upon the student to show that there was insufficient basis for a reasonable instructor to find that academic misconduct occurred, and/or that the instructor’s selection of academic consequences for the misconduct was arbitrary, capricious, or grossly unjust (e.g., a clear departure from the instructor’s announced policies). The appeals committee may:

- Uphold the instructor’s decision.
- Find that the facts of the situation could not provide a reasonable instructor with sufficient basis for finding that academic misconduct occurred, and recommend that the dean of the college set aside the finding or determine the facts differently.
- Find that the instructor’s selection of academic consequences for the violation was arbitrary, capricious, or grossly unjust, and recommend that the dean of the college set aside the academic consequences or impose a different academic consequence.

After receiving this recommendation the dean will either sustain or deny the appeal. The dean’s decision will be in writing. The dean’s decision will be final. If it is necessary pending the resolution of an appeal, the student will be assigned a deferred grade.

E. Formal Proceedings in the Office of Student Conduct 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 can 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.
Financial Information

Student Account Services and University Billing

Central Michigan University
Bovee University Center 119
Mount Pleasant MI 48859
989-774-3618
888-610-4991
Fax: 989-774-1452
E-MAIL: recacct@cmich.edu

Central Michigan University utilizes a centralized billing method to bill for all departments at CMU. The Student Account Services and University Billing Office is responsible for the billing and collection of student accounts. Each student has an account with the University that is identified by 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. 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.

Past Due Policy for Fall Semesters Only

Any student registered for a Fall semester with a past due balance of $200.00 or greater will be removed from all registered courses on August 1st. All students will receive prior notification of the registration removal after the July billing statements have been issued (approximately the first week in July). If past due balances are not brought current after notification is sent and before August 1st, registration from courses for the Fall semester will be removed.

Tuition and Fees

Tuition and fees are established by the Board of Trustees and are subject to possible change. Contact the Student Account Services and University Billing Office at 888-610-4991 for updated information, or see http://www.cmich.edu/registrar_office/RegistrarRegistration/Pages/Tuition_and_Fee_Schedule.aspx for updates.

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

CMU has a convenient and affordable tuition payment plan. The payment plan is an interest-free way to help you pay for college. You can enroll online for this option, which allows you to have more flexibility with tuition payments. For more information, ask a Student Service Court Advisor located in Bovee University Center 119 or see https://www.cmich.edu/fas/fsr/student_acct_university_billing/SASUBCMUPaymentPlan/Pages/default.aspx.

Tuition Rates for Main Campus Credit Courses

<table>
<thead>
<tr>
<th>Level of Courses</th>
<th>Michigan Residents</th>
<th>Non-Michigan Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s/Specialist</td>
<td>$507.00</td>
<td>$766.00</td>
</tr>
<tr>
<td>Doctoral</td>
<td>$583.00</td>
<td>$850.00</td>
</tr>
</tbody>
</table>

Application Fees

Graduate:
• $35.00 for U.S. citizens and resident aliens to be submitted with the application form; $45 beginning January 1, 2015.
• $45.00 for international students to be submitted with the application form; $60 beginning January 1, 2015.

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.
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 2014-2015 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 2014-2015 range from $595 to $653.

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; $15 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/cmupolice/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 as 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 II.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 person either serving in the US military who has no previous history of living in Michigan but is on active duty in Michigan or has formerly served in the US military and has been honorably discharged, or that is receiving VA educational entitlement, including family members, may be classified as a Michigan resident for tuition purposes. In addition, any 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. Family members include the spouse or dependent only. Veterans without a VA COE must receive a separation from active duty under “honorable” conditions. Period 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.

(continued)
Central Michigan University

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.

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 continues to disagree 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 Dean of the College of Graduate Studies, 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 the College of Graduate Studies, that individual must file a properly completed Application for Resident Status with the Registrar's Office. The Application for Resident Status must be received 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 non-resident 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 Admissions, the Registrar, the Director of International Affairs, the Assistant Vice President For Student Affairs, and the Dean of the College of Graduate Studies, or their respective designees. At least three of these individuals must participate in an appeal. The decision of the majority of those participating in the appeal shall be conclusive.
The right to inspect and review the student's educational records. They are:

- affords students certain rights with respect to their educational
- date of employment, and location.
- of self-certification by the student, giving names of employer,
- appropriate evidence may also be used by migrant workers to
- Michigan Farm Labor and Rural Manpower Services Office. Other
- guardians, were employed in Michigan for at least two months
- the residency requirement if they, or their parents, or legal
- traveled interstate for this purpose. Migrant students will meet
- livelihood in seasonal work in the State of Michigan and have
- a student is domiciled in Michigan for tuition purposes. Michi
- Residency Status for
- fellows and assistants are given in-state tuition for the duration
- Tuition Status for
- Graduate Fellows and Assistants
- For the purposes of determining tuition rates, doctoral level
- fellows and assistants are assigned in-state tuition for the duration
- of their program of study. Master's and specialist's level fellows
- and assistants are classified as Michigan residents only during
- the academic year of the award (including subsequent summer).
- Residency Status for Migrants
- Migrant status is one factor considered when determining if
- a student is domiciled in Michigan for tuition purposes. Michi
- gan migrants are defined as individuals who have made their
- eligibility 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 Migrants
- The Family Educational Rights and Privacy Act
- of Education when performing their legal function
- members of the faculty
- • members of the professional, executive and administra-
- • members of the Central Michigan University Police Depart-
- ment in an emergency if knowledge of the information is
- • members, 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 con-
- tracted (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.

(continued)
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. If a selection is not made, the student will be defaulted to receive the CMU Money Card which will be mailed to their permanent mailing address.

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 $1,000 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>Length of Session</th>
<th>Calendar Days Beginning with First Day of Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Weeks</td>
<td>Days 1-10 11-26 27-54</td>
</tr>
<tr>
<td></td>
<td>Refund 100% 50% 25%</td>
</tr>
<tr>
<td>10 Weeks</td>
<td>Days 1-5 6-17 18-33</td>
</tr>
<tr>
<td></td>
<td>Refund 100% 50% 25%</td>
</tr>
<tr>
<td>8 Weeks</td>
<td>Days 1-4 5-12 13-26</td>
</tr>
<tr>
<td></td>
<td>Refund 100% 50% 25%</td>
</tr>
<tr>
<td>5 Weeks</td>
<td>Days 1-3 4-8 9-17</td>
</tr>
<tr>
<td></td>
<td>Refund 100% 50% 25%</td>
</tr>
</tbody>
</table>

Global Campus Refunds
Drop or Withdraw from a CMU Global Campus Course:
- A Drop occurs prior to the course start or prior to the 2nd meeting time for face-to-face classes or the 2nd week for CMU Online classes.
- A Withdrawal occurs after second meeting time for face to face classes or after the second 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.asp). 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 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 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 a $900 cancellation fee.
- Cancellation of this agreement after November 1, but prior to the end of the fall semester shall result in 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/FinancialAid.aspx](https://www.cmich.edu/colleges/cmed/students/Pages/FinancialAid.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 College of 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 College of Graduate Studies.

College of Graduate Studies 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.

College of Graduate Studies Fellowships are awarded on a competitive basis to students enrolled full-time in a master’s or specialist’s degree program at CMU. The fellowship provides a stipend, a tuition scholarship for up to 24 graduate-level credit hours, and special library privileges. For the current stipend amount contact the College of Graduate Studies. The 24 graduate-level credit 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. College of Graduate Studies Fellowships pays for graduate tuition at the main campus tuition rate but will not pay for undergraduate coursework. All master’s and specialist’s level fellows are classified as Michigan residents only during the academic year of the award including the subsequent summer. Recipients of a fellowship may act as a research fellow under the tutelage of a designated faculty member.
Eligibility. Only full-time students enrolled in their first or second semester in a master's or specialist's degree program are eligible to apply. Doctoral-level students should apply for Doctoral Research Fellowships.

Note: Recipients must register for and complete at least nine graduate credit hours with a cumulative GPA of 3.0 or better each semester in order to retain their fellowship.

Application Procedures and Deadline. Applicants must submit the following items by the first Monday in February. Late applications and/or applications with missing supporting materials will not be considered. Award recipients are notified by late March.

• Completed College of Graduate Studies Fellowship application (available on the College of Graduate Studies website).
• Official GRE or GMAT score report - To ensure test scores arrive on time, the GMAT must be taken no later than October and the GRE no later than December.
• A personal statement describing the students qualifications for the fellowship and intended goals for graduate study
• Three letters of recommendation from academic or working professionals. Recommendations from friends, family members or co-workers are not acceptable.
• Prospective students must also apply to the College of Graduate Studies following the normal application process.

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 postsecondary 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 the College of 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 currently be 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 department and the College of Humanities and Social and Behavioral Sciences. Income from the endowment will (continued)
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.

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 science who has earned a 3.0 or higher GPA.

Richard & Colleen Burns Scholarship
Established in 2013 by Richard, 1960, 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 Department of Physical Education and Sport. Income from this endowment will support a renewable scholarship for CMU’s Global Campus Programs students with a 3.0 minimum GPA.

CMU Women’s Connection Scholarship
Established in 2005 by CMU Women’s Connection donors. Income from the endowment will support a scholarship for students enrolled in a graduate degree program of the Department of Communication Disorders.

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 available 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 a graduate student(s) who wishes to study abroad. The recipient(s) must be actively engaged in the advancement of the university and the financial need with a minimum GPA of 2.75.

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) must 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.

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 a scholarship for students enrolled in the political science department who have interest in state and local government. Recipient must possess a minimum GPA of 3.0 on a 4.0 scale. Preference will be given to a graduate student, followed by a senior or junior.

Richard D. Featheringham Endowed Scholarship
Established in 2005 by Richard, 1960, 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 Department of Physical Education and Sport. Income from this endowment will support a renewable scholarship for CMU’s Global Campus Programs students with a 3.0 minimum GPA.

CMU Women’s Connection Scholarship
Established in 2007 by CMU Women’s Connection donors. This association provides a platform for alumnae and friends to be actively engaged in the advancement of the university and to promote enhanced learning opportunities for CMU students. Income from this renewable award will support a part-time or full-time student at CMU who is a single parent or to a student from a single parent household. Recipient must demonstrate financial need with a minimum GPA of 2.75.

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

Anne Miller-Quimper Memorial Award  
The Anne Miller-Quimper Memorial Award was established in 1991 through 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. Pothoff, 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, History, Political Science, Speech, or Sociology. 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.

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.
Robert L. Winternmyer Endowed Scholarship Fund for Physician Assistant Students

Established in 2011 by Robert Winternmyer ’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, 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 is a faculty member in the CMU Department of Biology.

Small Grants and Awards

Applications, current deadline and award amounts are available on the College of Graduate Studies website (grad.cmich.edu).

Research and Creative Endeavors Grants. Graduate Research & Creative Endeavors Grants provide funding to off-set the costs associated with conducting research or producing a creative endeavor. Applications are review twice per year.

Presentation Grants. Graduate Presentation Grants provide funding for students who research or creative endeavor are accepted for presentation at the state, national, or international level. Applications are review three times per year.

Dissertation Research Support Grant. This grant provides funding to off-set the costs associated with a student’s dissertation project. Applications are reviewed twice per year.

Outstanding Thesis, Doctoral Project, Dissertation, and Plan B Award. This award recognizes significant scholarly activity by graduate students and the contribution made by their faculty advisor. Students may be nominated by any CMU faculty member for an outstanding document completed at CMU during the 12 months prior to nomination. Nominations are due in September.

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: www.cmugsu.org/. 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 the College of 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 College of 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 College of Graduate Studies.

U.S. Department of Homeland Security regulations affect international students’ eligibility for assistantships. The College of 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 loans 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 earned credits. Grades of NC (no credit), 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.

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.

(continued)
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 interview before their loan funds may be applied to their accounts. Important information on loans, debt management, repayment options and consequences of default will be presented. Information regarding this mandatory session is enclosed with the student’s award package.

**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 online exit counseling. Exit counseling materials will be mailed to students who fail to complete on-line exit counseling within 30 days of notification. During exit counseling CMU is required to obtain the following information from the borrower:

- expected permanent address
- name and address of the borrower’s expected employer
- address of the borrower’s next of kin
- any corrections to CMU’s records concerning name, address, social security number, references, and driver’s license number

For Federal Direct loans, CMU is required to provide the above information to the federal servicer within 60 days of the exit counseling completion.

**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 can 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 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.
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 the College of Graduate Studies. 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 College of 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 formats (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 can 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 - Graduate form approved and signed by the advisor;
4. Completed at least ten hours of graded graduate coursework on the chosen program at CMU with a cumulative graduate 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 Dean of the College of Graduate Studies.

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 qualifying examinations 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 graduate 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 Dean of the College of Graduate Studies.
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 can 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 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 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 do not guarantee approval by the College of 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 the College of Graduate Studies, 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 236 of this Bulletin for Teacher Certification information.

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 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;
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 College of 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 do not guarantee approval by the College of 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 the College of Graduate Studies 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. Fulfilled all of the requirements of 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 do not guarantee approval by the College of 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 the College of Graduate Studies 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. The student must pass an oral defense of the completed dissertation. The committee members are the examining committee and determine whether the student passes the defense. The dissertation must be prepared according to the regulations prescribed in the College of Graduate Studies' most recent edition of the Guidelines for the Preparation of Theses, Doctoral Projects, and Dissertations.
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 do not guarantee approval by the College of 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 the College of Graduate Studies and paid the required graduation fee. (See Graduation Procedures.)

NOTE: Particular doctoral programs may have more specific or more stringent program requirements.

(continued)
Thesis, Doctoral Project, Dissertation, or Journal Article

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 the College of 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 Sponsored Programs.

For stylistic guidelines, students are expected to follow the most recent College of 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 www.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 the College of 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 Dean of the College of Graduate Studies as well as the committee verified by the College of 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 Dean of the College of 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.

Final Stages of Thesis, Doctoral Project, Dissertation or Journal Article Preparation

The final draft of the defended, committee-approved thesis/doctoral project/dissertation/journal article must be submitted to the College of Graduate Studies for approval according to the deadlines set forth by the College of 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 the College of Graduate Studies. Application deadline dates are published on the front inside cover of this Bulletin. Graduation applications are available on the College of Graduate Studies website.

Application for Graduation. In order to graduate, the student must submit a Graduation Application form. The form must be submitted to the College of Graduate Studies 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 in the College of Graduate Studies 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 indicates what the student must do before graduating. 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, the College of Graduate Studies has developed a Self Audit form, available in the College of Graduate Studies. 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 the College of Graduate Studies.
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.

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<thead>
<tr>
<th>Letter</th>
<th>Qualitative Unit</th>
<th>Quantitative Unit</th>
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<tbody>
<tr>
<td>A</td>
<td>Superior</td>
<td>4.0 points per semester hour</td>
</tr>
<tr>
<td>A-</td>
<td>Superior</td>
<td>3.7 points per semester hour</td>
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<tr>
<td>B+</td>
<td>3.3 points per semester hour</td>
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<tr>
<td>B</td>
<td>3.0 points per semester hour</td>
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<td>B-</td>
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<td>C+</td>
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<tr>
<td>C</td>
<td>2.0 points per semester hour</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Failing</td>
<td>0.0 points</td>
</tr>
</tbody>
</table>

CR  Credit²
NC No Credit, Not included in grading
I Incomplete, computing or grade points or percentage credit
W Withdrawn, for graduation
X Audit, for graduation
Z Deferred Grade

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

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. The GPA is rated in accordance with the following marking system. 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.

Academic and Retention Standards

In order to obtain a degree, a student must have at least a 3.0 (B) cumulative graduate grade point average, and a cumulative graduate grade point average (CGPA) of 3.0 (B) in all course work on the student’s authorized degree program. The policies which follow deal with cumulative grade point average; the College of Graduate Studies monitors overall graduate grade point averages and follows these procedures when a student’s cumulative 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 the College of 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 the Dean of the College of 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, the Dean of the College of 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 the Dean of the College 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 the Dean of the College of 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 option basis must be designated in the Class Schedule 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 doing failing work. A form must be completed and signed by the faculty member (and the student when possible) whenever a grade of I is assigned. The form is to be kept on file in the departmental office. An instructor who assigns 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 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

1. 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 with the student and give evidence to make clear his or 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's inquiry or upon his or her own initiative, the instructor who believes a change of grade is justified may initiate a request for a change in grade.

2. 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 sixty days after the beginning of the next regular semester. 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 or she may request in writing a joint consultation with the instructor and the chairperson of the department involved. In case 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 college involved. In such cases that dean shall act in place of the department chairperson.

3. The following procedures are available for review of allegations of capricious grading. They are not for review of the judgement of an instructor in assessing the quality of a student's work, nor are they to be used in cases involving academic dishonesty. Determination of the grade in such cases is left solely to the instructor. A student who is not satisfied after consultation with the instructor and department chairperson, and who alleges that the semester grade is the result of capricious grading, may file an appeal within ninety days of the start of the next regular semester 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 particularizing the basis for the allegation that the grade was the result of capricious grading, and present any evidence that he or she may have.

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 or her performance in the course; (b) the assignment of a grade to a particular student by resorting to more exacting or demanding standards than were applied to other students in that course. 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.
4. 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, it appears that the dispute may 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. If the instructor of the course is a member of the committee, he or she shall be disqualified from the consideration of that appeal.

5. If such a meeting is not held, or if held, such 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.

6. 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 proceed to determine the most appropriate remedy. The committee may direct the instructor to grade the student's work anew or to give the student a new examination in the course, or may 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 for the course. The decision of the committee shall be final and shall be reported in writing to the student, instructor, and departmental office.

7. 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, dematriculation, or withdrawal from the university. The same procedures as outlined above for review of alleged capricious grading shall be followed.

8. All dematriculations (grade point or additional department requirements) from CMU graduate programs will follow the grade grievance process.

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 Dean of the College of Graduate Studies.

Graduate Transfer Credit Policy

Transferable Credit:
- **Graduate Certificate**: maximum of 6 semester hours from a previous or concurrent graduate degree or certificate can 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 Dean of the College of 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 College of Graduate Studies;
2. The credits are not in violation of any pertinent university or College of 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;

(continued)
10. The student is responsible for having official graduate transcripts sent to the institution to which the credit was awarded directly to the Dean of the College of Graduate Studies 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 Dean of the College of 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. Exceptions to any aspect of this policy will be considered only in extraordinary circumstances and will be granted at the discretion of the Dean of the College of Graduate Studies.

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. 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.

Pre/Co-requisite(s) – Any course and/or other requirement(s) must be completed prior to enrolling in a particular course.

5. Credit by examination may not be used to repeat any course previously taken, either to remove a failure or to improve a grade, as provided in the Repeat Course Policy.

At the time of the request, the student must have an Authorization of Degree Program signed by the advisor on file in the College of Graduate Studies. The student should obtain the application form for the credit by examination from the College of Graduate Studies and then obtain approval from the faculty member administering the examination, the department chairperson, and the Dean of the College of Graduate Studies. Approval may be granted for the number of credits requested or any portion of the credits requested. The student must submit the signed application for credit by examination to the Registrar's Office to register for the number of credits approved.

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 the College of 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 the College of Graduate Studies.

Courses numbered 800-899. Graduate courses open only to students who have been admitted to the College of 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 the College of 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 the College of Graduate Studies. In granting approval, the College of 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 the College of Graduate Studies at CMU. The academic advisor and the Dean of the College of Graduate Studies sign the application to indicate that the student is qualified and eligible, and the College of Graduate Studies 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 options.
- 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 doctorate 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-on-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 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 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 specially 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.
Course Descriptions: ACC

ACC 501 Advanced Accounting 3(3-0)

Intercompany investments and consolidated statements, purchases and pooling of interests, segment reporting, interim reporting, partnerships, foreign operations, and fund accounting. Prerequisites: completion of ACC 301 and ACC 302 with average of 2.5 GPA for both courses; 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

ACC 511 Federal Income Tax II 3(3-0)

Formation, operation, distributions, redemption, dissolution, and liquidation of corporations, partnerships, Subchapter S corporations and personal holding companies; accumulated earnings tax; tax shelter investments. 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 decrements final income tax return. Prerequisites: ACC 517; 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 531 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 531, 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)

Emphasis on 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, ACC 321, ACC 370; 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 791 Independent Studies 1-3(Spec)
Directed reading or research on an approved topic. Prerequisites: 15 hours of graduate credit and instructor approval. Not more than 3 credits for ACC 791 may count toward accounting concentration.

ACC 797 Special Topics in Accounting 1-3(Spec)
Advanced topics in accounting. Prerequisite: permission of instructor. No more than 3 credits for ACC 797 may count toward accounting concentration.

DEPARTMENT OF ART AND DESIGN (ART)
College of Communication and Fine Arts

Larry Burdett, Chairperson
132 Wightman Hall, (989) 774-3025
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
David Stairs, M.F.A., Graphic Design
Margaret Ware, M.F.A., Sculpture
Al Wildey, M.F.A., Photography
Course Descriptions: ART

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 516 Advanced Problems in Figure Drawing 3(0-6)
An individualized studio experience with emphasis on the human figure that would include problems in foreshortening, placement, and composition. Prerequisite: ART 416.

ART 530 Painting V 3(0-6)
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 540 Photography V: Professional Practices 3(0-6)
An individualized studio experience for the advanced photography student, emphasizing long-term independent projects, critiques, and the creation of a professional portfolio. Prerequisite: ART 340, 440.

ART 550 Printmaking V 3-6(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 560 Professional Development in Sculpture 3(0-6)
An individualized studio experience focusing on personal research of new techniques, processes, materials, history and concepts of traditional and contemporary sculpture, and professional development. Prerequisites: ART 460 or 462.

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 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 105 and permission of instructor.

ART 586 Seminar in Art History 3(3-0)
Students will pursue topics of special interest and share their research with the group. May be taken for graduate credit. Prerequisites: 12 credits in art history 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 (BIO, MAR)
College of Science and Technology

Stephen Roberts, Chair
217 Brooks Hall, (989)774-3227; https://www.cmich.edu/colleges/cst/biology/

Elisabeth Alm, Ph.D., microbial ecology, environmental microbiology
Robert E. Bailey, Ph.D., quaternary paleoecology, ecological systems analysis, environmental impact assessment
Hunter Carrick, Ph.D., aquatic ecology, health and biogeochemistry of aquatic systems
Gregory Colores, Ph.D., microbial ecology, soil microbiology, biodegradation
Cynthia Damer, Ph.D., molecular mechanisms of membrane trafficking, cell biology, genetics, microscopy
Joanne Dannenhoffer, Ph.D., botany, plant cell biology, plant physiology
Tracy Galarowicz, Ph.D., fish ecology and management
Thomas M. Gehring, Ph.D., GIS applications, landscape ecology, management of wildlife-human conflicts, predator-prey ecology, wildlife conservation
Steven W. Gorsich, Ph.D., stress tolerance and oxidative damage during yeast fermentation and spore development using cell, molecular, genetic and molecular techniques
Philip L. Hertzler, Ph.D., developmental biology of aquatic and marine invertebrates
Stephen J. Juris, Ph.D., toxin biochemistry, molecular mechanisms of bacterially pathogenesis, cellular biology of host-pathogen interactions
Xantha Karp, Ph.D., Developmental timing and cell fate plasticity in C. elegans, using genetic and molecular approaches
Jonathan Kelty, Ph.D., stress tolerance, neurobiology, neural control of respiration, environmental physiology
Peter S. Kourtev, Ph.D., structure and function of microbial communities in the environment
Deric R. Learman, Ph.D., geomicrobiology
Debra Linton, Ph.D., biology education, science teacher training
Eric W. Linton, Ph.D., bioinformatics, eukaryotic microbiology and systematics
Andrew Mahon, Ph.D., molecular ecology, aquatic surveillance for rare species, Antarctic phyllogeography, systematics
A. Scott McNaught, Ph.D., limnology, zooplankton ecology, statistics
Anna K. Monfils, Ph.D., plant biology, systematics and evolution
Kirsten E. Nicholson, Ph.D., evolution and systematics of vertebrates, particularly reptiles and amphibians; museum studies
Charles E. Novitski, Ph.D., eukaryotic molecular biology, recombinant DNA technology, plant nematode development
Kevin Pangle, Ph.D., predator-prey interactions, phenotypic plasticity, Great Lakes food webs
Stephen P. Roberts, Ph.D., integrative biology
John I. Scheide, Ph.D., mechanism and regulation of ion transport in cells and tissues of vertebrate and invertebrate species
Jennifer Schisa, Ph.D., cell and molecular effects of stress and aging

Nancy E. Seefelt, Ph.D., ecology and evolution of vertebrates, ecological modeling, ornithology
Michelle L. Steinhilb, Ph.D., genetic models of human neurodegenerative disease, cellular and molecular neurobiology
Bradley J. Swanson, Ph.D., ecology, molecular ecology, conservation biology, population genetics, population dynamics, animal behavior
Don Uzarski, Ph.D., limnology, wetland and stream ecology, experimental design
Rebecca Uzarski, Ph.D., toxicology, cell biology
Daelyn Woolnough, Ph.D., spatial ecology of aquatic and terrestrial systems
Dave Zanatta, Ph.D., aquatic ecology, molecular ecology, conservation of freshwater mussels

The Department of Biology has two Master of Science (MS) degrees: the M.S. in Biology (general) and the M.S. in Biology with an emphasis on conservation. The general biology M.S. is designed to prepare students for careers in all areas of biology. The conservation biology M.S. is designed to prepare students for careers with state and federal agencies or non-government organizations. Students enrolled in the general M.S. in Biology program may pursue a Plan A (thesis) or Plan B (non-thesis) option. Students enrolled in the M.S. conservation concentration program may pursue a Plan A option only.

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 research 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. 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. and 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 degrees. Plan A requires completion of six credit hours in BIO 798 (Thesis), one credit hour in BIO 730 (Seminar), 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 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

<table>
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<tr>
<td>GPA: 3.0 (and 3.0 in major)</td>
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<td>Entrance Exam: GRE</td>
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<tr>
<td>Intern'l Application Deadline:</td>
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<td>July 1 (Fall), Oct. 1 (Spring)</td>
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<td>See Admission Requirement Details Below</td>
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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 (including organic) 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 (7-12 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 1-6(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 (7-12 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 1-6(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 biological statistics; 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 22 hours of biology; a GPA of 2.7 in biology courses; admission to 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 3(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, morphology, and the ecology of animal populations. Prerequisites: BIO 218 or graduate standing.

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, 522.

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 313 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 biological and biochemical 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 218 or graduate status.

BIO 541 Wildlife Biology and Management 4(2-4)

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 1(0-3)

Laboratory course, to accompany BIO 545, explores genetic techniques and modern molecular methods, including recombinant DNA technology and functional genomics in model systems. Pre/Co-requisites: BIO 545.

BIO 549 Herpetology 3(2-3)

Survey of extant amphibians and reptiles from standpoint of morphology, behavior, physiology, evolution, and ecology. Local collecting field trips required. Prerequisites: BIO 218 or graduate standing.

BIO 550 Transmission Electron Microscope Technique 4(1-6)

Biological specimen preparation and examination. Photographic aspects of electron micrograph production.

BIO 552 Scanning Electron Microscope Technique 4(3-3)

Principles, practices and techniques of SEM, including 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 energy dispersive spectrometer (EDS). Includes specimen preparation and operation of 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 watersheds 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 behavior, 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 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 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 577  Hematology and Immunohematology 3(2-3)
Concepts of hematopoiesis and immunohematology, including cell counts and white cell morphogenesis, physiology and pathophysiology. Clinical techniques and procedures commonly used in hematological evaluation. Prerequisite: 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  Neurophysiology 3(3-0)
Principles of nervous system function: cytology, electrophysiology, ion channels, membrane potentials, neurochemistry, synaptic function and its modification, sensory physiology. Prerequisites: BIO 392.

BIO 597  Special Topics In Biology 1-9(Spec)
Topics of special interest that are not normally included in existing courses. Specific topics and instructor's prerequisites will be announced in Course Search and Registration. Prerequisite: See Course Search and Registration.

BIO 600  Biological 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 areas 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)
Anon-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)
Seminar on current research papers in molecular genetics of animals, plants and fungi. Student presentations and discussions expected. May be repeated up to 4 credits. Prerequisites: Admission to the Biology M.S. program.

BIO 630  Art of Scientific Communication 2(2-2)
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)
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 327.

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 MAT 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 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)  
Accounts the student with research techniques. Prerequisite: Registration requires the approval of the department chairperson. CR/NC only.

BIO 798 Thesis 1-6(Spec)  
An acceptable thesis may be presented for six hours of credit. Prerequisite: Plan A thesis prospectus on file in the biology office and approval of the department chairperson. CR/NC only.

Course Descriptions: MAR

MAR 590 Special Problems in Marine Science 1-6(Spec)  
Prerequisites: permission of instructor.

School of Broadcast and Cinematic Arts (BCA)

College of Communication and Fine Arts

Peter B. Orlik, Director  
340 Moore Hall, (989)774-3851.
Sarah Adams, M.A., Central Michigan University; Media Criticism
William Anderson, Ed.D., Northern Illinois University; Writing, Promotion, Public Relations
Edward Christian, M.A., Central Michigan University; Media Management, Sales
Kevin Corbett, Ph.D., Bowling Green State University; Film Studies, Scriptwriting
Aaron Jones, M.A., Central Michigan University; Video Production
Kenneth Jurkiewicz, Ph.D., University of Detroit; Film History, Theory, Criticism
Eric Limarenko, M.F.A., Savannah College of Art and Design; Video, Graphics, Multimedia Production
Maggie Mayes, M.A., Central Michigan University; Electronic Journalism, Performance
Peter B. Orlik, Ph.D., (School Director) Wayne State University; Writing, Criticism
W. Lawrence Patrick, Ph.D., Ohio University; J.D., Georgetown; Media Management, Regulation, Economics
Mark Poindexter, Ph.D., University of Minnesota; Media Theory and Criticism, International and Comparative Media
Heather Polinsky, Ph.D., Michigan State University; Audio Production, Quantitative Research Methods, Radio Operations, Policy
Chad Roberts, M.S., St. Cloud State University; Radio Operations, Audio Production
Amy Sindik, Ph.D., University of Georgia; Electronic Media Law, Management
Jeffrey Smith, Ph.D., (Internship Supervisor) Ohio University; Multimedia Applications, Convergence
Trey Stohlman, Ed.D., Central Michigan University; Writing, Assessment, Qualitative Research Methods
William R. Sykes, M.A. (Assistant Director), Central Michigan University; Electronic Journalism
Tiffani Waite, M.A., Central Michigan University, Programming
Patty Williamson, Ph.D. (Graduate Coordinator), Michigan State University; Criticism, Research Theory, Film Studies

Facilities
The School of BCA oversees WMHW-FM, a two-service HD FM station which broadcasts 365 days a year at 91.5 and 101.1; two television studios servicing cable station MHTV; two advanced audio studios; video-editing suites; a computerized newsroom from which News Central, the area’s only locally focused television newscast, is produced; and an online production suite for M2D2, the school’s web and multimedia publisher. The school also maintains its own recording studio, Moore Media Records, and oversees CMU’s Film Society.

Graduate Assistantships
Broadcast and Cinematic Arts graduate assistants aid in teaching basic audio, video, and news production sections and film survey courses, as well as performing other online and administrative duties as determined by the School Director. For a graduate assistantship application, contact the director at 340 Moore Hall, CMU, Mount Pleasant, MI 48859 or visit www.bca.cmich.edu.
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, Retention & Termination Standards

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<td>See Admission Requirement Details Below</td>
</tr>
</tbody>
</table>

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 - Seminar in Media Convergence 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-Film 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

(Continued)
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)

Required Courses II (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 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 529 - Internship in Electronic Media-Film 2-6(Spec)
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 584 - Recording Industry & Business 3(3-0)
BCA 612 - Electronic Media Seminar 3(3-0)
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: Electronic Media Management

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 (18 hours)
BCA 516 - Electronic Media Management 3(3-0)
BCA 601 - Theories of Mass Communication 3(3-0)
BCA 603 - Qualitative Mass Communication Research Methods 3(3-0)
BCA 604 - Quantitative Mass Communication Research Methods 3(3-0)
BCA 611 - Seminar in Telecommunications Media Policy 3(3-0)
BCA 613 - Seminar in Media Convergence 3(3-0)

Required Courses II (3 hours)
Select one of the following:
BCA 519 - Electronic Media Programming 3(3-0)
BCA 533 - Advanced Electronic Media Design 3(2-2)
BCA 540 - Recording Industry & Business 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 (3-6 hours)
Select from the following:
BCA 505 - Critiquing Mass Media 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 519 - Electronic Media Programming 3(3-0)
BCA 524 - Producing Television News 3(1-4)
BCA 529 - Internship in Electronic Media-Film 2-6(Spec)
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 584 - Recording Industry & Business 3(3-0)
BCA 612 - Electronic Media Seminar 3(3-0)
BCA 729 - Advanced Independent Study in Electronic Media 1-9(Spec)

Note: BCA 560 and 561 are offered in Summer only.

Total: 30 semester hours

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 611 - Seminar in Telecommunications Media Policy 3(3-0)
BCA 613 - Seminar in Media Convergence 3(3-0)

Required Courses II (3-6 hours)
Select three of the following:
BCA 511 - Electronic Media Sales 3(3-0)
BCA 512 - Electronic Media Promotion 3(3-0)
BCA 519 - Electronic Media Programming 3(3-0)
BCA 524 - Producing Television News 3(1-4)
BCA 529 - Internship in Electronic Media-Film 2-6(Spec)
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 584 - Recording Industry & Business 3(3-0)
BCA 612 - Electronic Media Seminar 3(3-0)
BCA 729 - Advanced Independent Study in Electronic Media 1-9(Spec)

Note: BCA 542 is offered in Summer only.

Required Courses III (3 hours)
BCA 730 - Plan B Project Research 3(3-0)
Electives (3 hours)
BCA 505 - Critiquing Mass 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 519 - Electronic Media Programming 3(3-0)
BCA 524 - Producing Television News 3(1-4)
BCA 529 - Internship in Electronic Media-Film 2-6(Spec)
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 584 - Recording Industry & Business 3(3-0)
BCA 612 - Electronic Media Seminar 3(3-0)
BCA 729 - Advanced Independent Study in Electronic Media 1-9(Spec)

Note: BCA 542 is offered in Summer only.
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 scripts emphasizing story structure, characterization, and creative team dynamics for specific scripts and original electronic media series. May be offered as Writing Intensive. Prerequisites: BCA 210 with a C or better or signed Cinema Studies minor or graduate standing. Recommended: BCA 411.

BCA 508 Screenwriting for Cinematic Narrative 3(3-0)
Techniques, formatting styles and aesthetic strategies for writing and analyzing short- and feature-length cinematic narratives and 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.

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 radio, television, and cable sales. Emphasis on selling techniques found most reliable in modern sales practices. Prerequisites: BCA 210 with a grade of C or better; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

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-event production and electronic sports reporting. Prerequisites: BCA 210, 317 each with C or better; or graduate standing in Broadcast and Cinematic Arts.

BCA 516 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 and long form narrative video, with emphasis on the aesthetic aspects of lighting, direction and editing. Prerequisites: BCA 210, 223, 440 each with a grade of C or better; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

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)
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 GPA required. Prerequisites: 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 programming specifically for and within institutional/corporate settings. Prerequisites: BCA 210, 223, 440 with a minimum grade of C in each; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

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 in Broadcast and Cinematic Arts.

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 recording 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 I 3(1-4)
Preparation and performance in radio broadcast practices, emphasizing daily operations and radio management principles. Summer Session I only. Laboratory hours arranged with instructor. Prerequisites: Minimum 2.25 GPA, BCA 222 or 317; or graduate standing in Broadcast and Cinematic Arts.

BCA 561 Radio Operations II 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 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)
An 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 603 or 604.

BCA 613 Seminar in Media Convergence 3(3-0)
Examination of social and legal issues in electronic media environments related to technological convergence. Prerequisites: BCA 601; BCA 602 or 603 or 604.

BCA 619 Continuing Registration for Final Research Project 1(1-0)
An on-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. Prerequisite: Graduate standing in Broadcast and Cinematic Arts.

BCA 720 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. Prerequisite: 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 ABSC - 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 and 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

<table>
<thead>
<tr>
<th>GPA: 2.7</th>
<th>Entrance Exam: GMAT</th>
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<tbody>
<tr>
<td>Internat'l Application Deadline: July 1 (Fall), Oct.1 (Spring)</td>
<td>See Admission Requirement Details Below</td>
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To be considered for admission to the MBA program, a student must first be admitted to the College of Graduate Studies. The Application for Admission should be sent to the College of 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 the College of 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 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 the College of 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)

(Continued)
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 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 501 Presentation Graphics Applications in Business 1(1-0)
Application of presentation graphics software tools in preparing and delivering professional management briefings that provide information which supports the solution of common business problems. Course may not be included on any graduate degree program. Prerequisites: computer literacy as demonstrated by BIS 104, CPS 100 and prior knowledge of presentation graphics software; admission to the MBA program OR both graduate status 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 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. This course is approved for offering in a distance learning format. Prerequisites: knowledge of advanced business applications in spreadsheets, database, and presentation graphics software, administration to the MBA program or permission of the MBA director. Recommended: MBA 503 and MBA 507.

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)
This 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. Course provides a framework for analysis of the investment and financing decisions of the firm and understanding of how to apply finance theory to practical situations. 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 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 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 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)
Implementation of the change strategy in the organization. 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

Frank J. C. Andera, Ed.D., Business Communication, Information Systems, Research
James J. Cappel, Ph.D., Information Systems, Research
Roger L. Hayen, D.B.A., Information Systems, Research
Nancy Hicks, Ph.D., Business Communications, Research
Monica Holmes, Ph.D., Information Systems, Research
Zhenyu Huang, Ph.D., Information Systems, Research
Mark I. Hwang, Ph.D., Information Systems, Research
Anil Kumar, Ph.D., Information Systems, Research
James Melton, Ph.D., Business Communication, Research
Robert Miller, Ph.D., Information Systems Research
James P. Scott, Ph.D., Information Systems, Research
Karl Smart, Ph.D., Business Communications, Research

Business Education emphasis is available in the Master of Arts in Secondary Education Degree (Page 203) and consists of 15 hours (refer to the Business Education graduate courses listed in this section.

See the College of Business Administration for information on the Master of Business Administration (MBA).

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 an applied project (Plan B).

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

ADMISSION REQUIREMENT SNAPSHOT

GPA: 2.7 (or 3.0 in the last two years of study)
Entrance Exam: N/A

INTERNATIONAL APPLICATION DEADLINE: July 1 (Fall), Oct. 1 (Spring)
See Admission Requirement Details Below

To be considered for regular admission, an applicant must have a bachelor’s degree from an accredited institution with a 2.7 GPA, or an undergraduate grade point average of at least 3.0 in the last two years of study.

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)
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

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 or undergraduate students who meet graduate school admissions requirements who desire to acquire advanced knowledge and skills in cybersecurity. Undergraduate students generally apply during their junior year for admission into a master’s program to begin Fall semester in their senior year.

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, or an undergraduate GPA of 3.0 and successful completion of BIS 380 or CPS 565.
2. Computer network literacy as demonstrated by prerequisite coursework or professional certifications in computer networking or cybersecurity.

To enroll in the first course, BIS 510, the student must have the prerequisites of BIS 380 or CPS 565, or regular admission to the Cybersecurity certificate. 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 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)
Identifying and managing security and privacy risks 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)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their 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)
This course involves 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 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. 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 business 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 Managerial Systems 3(3-0)
Application of the ABAP Programming language to implement business processing using the SAP R/3 System as an example of contemporary enterprise software. Prerequisites: BIS 628 or BIS 640, BIS 647 and admission to the MBA or MSIS program; or permission of the MBA or MSIS Director. This course is approved for offering in a distance learning format.

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.

BIS 660 Administrative Business Communication 3(3-0)
Developing and refining business communication skills for enhancing corporate policy, management, and technology. Prerequisite: admission to MBA or MBE.

BIS 667 Electronic Business Systems for e-Commerce 3(3-0)
Business opportunities, challenges, and strategies to leverage the global information infrastructure will be discussed. Students will also learn tools and technologies needed for electronic business systems. Prerequisites: admission to the MBA or MSIS program, or permission of the MBA or MSIS Director.

BIS 688 Directed Work/Observation/Internship 1-6(Spec)
Work or internship experience and/or directed observation at business sites. Prerequisite: Minimum of 9 credit hours in the MSIS program.

BIS 697 Special Studies in Business Information Systems 1-12(Spec)
Special topics of interest which are not normally included in existing courses. Specific topic will be listed on student’s transcript. Prerequisite: Minimum of 9 credit hours in the MSIS program.

BIS 791 Independent Research 3(Spec)
Development of research skills and completion of a formal research study. CR/NC only. Prerequisites: BIS 625; admission to the MSIS Program.

BIS 798 Thesis 1-6(Spec)
Provides the student with research skills through development and completion of a research study in a specific area of business information systems. CR/NC only. Prerequisites: BIS 625; admission to the MSIS Program.
DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY (CHM)
College of Science and Technology

David E. Ash, Chairperson
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David E. Ash, Ph.D., University of Pennsylvania, Biochemistry
Minghui Chai, Ph.D., University of Akron, Analytical Chemistry
Anthony Chappaz, Ph.D., INRS-ETE, University of Quebec, Geochemistry and Environmental Chemistry
Wenjun Du, Ph.D., University of California - Davis, Biomaterials, Organic and Polymer Chemistry
Bradley D. Fahiman, Ph.D., Rice University, Inorganic Materials Chemistry
Bob A. Howell, Ph.D., Ohio University, Organic and Polymer Chemistry
Anton W. Jensen, Ph.D., Brigham Young University, Organic Chemistry
Estelle L. Lebeau, Ph.D., University of North Carolina, Inorganic Chemistry
Dale J. LeCaptain, Ph.D., Michigan State University, Analytical Chemistry
Choon Young Lee, Ph.D., Northeastern University, Organic/ Medicinal Chemistry
Bingbing Li, Ph.D., Virginia Polytechnic Institute and State University, Physical Chemistry
Dillip K. Mohanty, Ph.D., Virginia Polytechnic Institute and State University, Polymer Chemistry
Anja Mueller, Ph.D., Washington University in St. Louis, Polymer Chemistry/Biomaterials
Ajit Sharma, Ph.D., Wayne State University, Biochemistry/ Clinical Chemistry
Philip J. Squatrito, Ph.D., Northwestern University, Inorganic Chemistry/Crystallography
Mary M.J. Tecklenburg, Ph.D., Texas A & M University, Physical/Analytical Chemistry
Janice Hall Tomasik, Ph.D., University of Wisconsin - Madison, Chemical Education

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, 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 assistantships 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>
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<tr>
<th>ADMISSION REQUIREMENTS, RETENTION &amp; TERMINATION STANDARDS</th>
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<tbody>
<tr>
<td><strong>ADMISSION REQUIREMENT SNAPSHOT</strong></td>
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<tr>
<td>GPA: 2.7 (and 2.7 in Chemistry)</td>
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<tr>
<td>Entrance Exam: GRE - General</td>
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<tr>
<td>Internat’l Application Deadline: July 1 (Fall), Oct.1 (Spring)</td>
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<td>See Admission Requirement Details Below</td>
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Applicants for admission to the Chemistry M.S. program must be admitted initially to the College of Graduate Studies. In addition to the College of 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 College of 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, (Continued)
and successful preparation and defense of a written thesis.

**Foundation Courses (9-10 hours)**
- 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

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**Master of Arts (M.A.) in Teaching Chemistry: Teaching College Chemistry**

**Minimum Totals for Graduation: 30 hours**

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

**ADMISSION REQUIREMENT SNAPSHOT**

- GPA: 2.7 (and 2.7 in Chemistry)
- Entrance Exam: GRE - General
- Internat'l Application Deadline: July 1 (Fall), Oct. 1 (Spring)

**See Admission Requirement Details Below**

**Applicants for admission to the M.A. in Teaching College Chemistry program must be admitted initially to the College of Graduate Studies. In addition to the College of 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 College of 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.**

**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

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

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

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

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

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**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. Identical to PHY 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.

**CHM 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 PHY 507. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Students must be accepted in 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.
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 1(0-4)
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 thermodynamical 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 351 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 mechanic 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)
Treatment of laboratory techniques common to polymer science: synthesis of polymers and the characterization of these materials by spectroscopic, thermal, and mechanical methods. Prerequisites: CHM 349. Co-requisite: CHM 561.

CHM 568 Pharmaceutical Chemistry 3(3-0)
Interdisciplinary introduction to the science of drug formulation, delivery and efficacy. 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 619 Continuing Registration for Final Research Project 1(1-0)
Anon-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 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)
Advanced methods for polymer synthesis; examples from the research literature are emphasized. Prerequisites: CHM 561 or SAM 710.

CHM 665 Advanced Topics in Polymer Chemistry 1-9(Spec)
Special topics in polymer 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 561.

CHM 667 Polymer Additives 3(3-0)
A description of polymer additives 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)
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 793 Chemistry Teaching Internship 1-9(Spec)
Teaching of undergraduate chemistry courses. Students carry out a teaching internship under the direction of a graduate faculty member. CR/NC only. Prerequisites: Admission to the Master of Arts in Teaching Chemistry program; permission of instructor.

CHM 794 Experimentation in the Teaching of Chemistry 1-6(Spec)
The research and development of techniques in chemistry education. CR/NC only. Prerequisites: Admission to the Master of Arts in Teaching Chemistry Program; permission of the instructor.

CHM 798 Thesis 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.
DEPARTMENT OF COMMUNICATION AND DRAMATIC ARTS
(COM, DAN, TAI)

College of Communication and Fine Arts

William Dailey, Chairperson
333 Moore Hall, (989) 774-3177

Steven Berglund, M.F.A., Theatre, Interpretation and Dance
Nancy L. Buerkel-Rothfuss, Ph.D., Communication
Elizabeth Carlson, Ph.D., Communication
Timothy Connors, Ph.D., Theatre, Interpretation and Dance
William Dailey, Ph.D., Communication
Ann Dasen, M.F.A., Theatre, Interpretation and Dance
Daniel Daugherty, M.F.A., Theatre, Interpretation and Dance
Nancy Eddy, M.F.A., Theatre, Interpretation and Dance
Pamela Gray, Ph.D., Communication
Edward Hinck, Ph.D., Communication
Stan Jensen, M.F.A., Theatre, Interpretation and Dance
Diane Krider, Ph.D., Communication
Alysa Lucas, Ph.D., Communication
Lauren McConnell, Ph.D., Theatre, Interpretation, and Dance
Joseph Packer, Ph.D., Communication
Michael Papa, Ph.D., Communication
Wendy Papa, Ph.D., Communication
Keeley Stanley-Bohn, M.F.A., Theatre, Interpretation and Dance
Jill Taft-Kaufman, Ph.D., Theatre, Interpretation and Dance
Annette Thornton, Ph.D., Theatre, Interpretation and Dance
Kirsten Weber, Ph.D., Director of Graduate Studies; Communication
Lesley Withers, Ph.D., Communication

Master of Arts (M.A.) in Communication

Minimum Totals for Graduation: 33 hours

The graduate program of study in Communication provides a strong background in communication research methods and classical and contemporary communication theory. Graduates from the program follow a variety of careers. Many continue graduate work in Ph.D. programs, become secondary or community college teachers, or find positions in business and media (marketing, management, training, consulting) or as coordinators of social service and volunteer organizations. Still others pursue careers in law, politics or the ministry.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

ADMISSION REQUIREMENT SNAPSHOT

GPA: 2.7 (and 3.0 in last 15 hours in Communication)
Entrance Exam: N/A
Application Deadline: March 15 (Fall), Oct. 15 (Spring)
International Students not from English Proficiency Exempted Countries: TOEFL required - minimum score of 100 (some exceptions may apply)

See Admission Requirement Details Below

In addition to the general university requirements, for regular admission to this program, the student must have an overall grade point average of 2.7 or higher in the last 60 hours of undergraduate credit, and a grade point average of 3.0 or higher in the last 15 hours of communication courses or courses determined by the department to be related to communication. A student who does not meet the above requirements may be admitted to graduate study on a conditional basis. Acceptance of transfer credit will be dependent upon the decision of the academic advisor. A maximum of 15 semester hours of 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 College of Graduate Studies for permission to transfer credit.

ENGLISH LANGUAGE COMPETENCY REQUIREMENTS

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 CBT, 100 iBT2) 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 Language 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 Language 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 and Dramatic Arts 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 604 - Contemporary Communication Theory 3(3-0)
COM 605 - Seminar in Organizational Communication 3(3-0)
COM 606 - 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. Assistants 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 1-9(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, COM 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 is approved for offering in a distance learning format. Prerequisites: grades of C (2.0) or better in COM 251, COM 301.

COM 561  Communication in Conflict Management 3(3-0)
Theory, research, and practical application of managing conflicts through communication. Focuses on conflict between people in the contexts of family, group, and organizations. Prerequisites: COM 251, 301 with grades of C or better.

COM 562  Family Communication 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 565  Communication Training in Organizations 3(3-0)
This course examines the role of training in improving communication in organizations. The course discusses the design, development, implementation, and evaluation of organizational communication training. Prerequisites: COM 251, 301 with grades of C or better; COM 264.

COM 569  Communication in the Classroom 3(3-0)
Integrated research from several fields describing communication patterns among students and teacher-to-student within school settings. Designed for students interested in teaching or administration. Prerequisites: 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 and Dramatic Arts 3(3-0)
Introduces students to qualitative and quantitative methods of research 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: Admitted into the Master of Arts in Communication program.

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

COM 660  Seminar in Interpersonal Communication 3-9(Spec)
Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit, 9 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 365.

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 667  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 668  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. Prerequisites: admission to the Master of Arts graduate program in Interpersonal and Public 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 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)
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 160, 260.

TAI 569 History of American Theatre 3(3-0)
Development of drama and theater in America from colonial times to the present. Prerequisite: 6 hours of TAI coursework.

TAI 570 Oral Interpretation of Prose Fiction 3(3-0)
Specialized study of the short story and novel, in both individual and group performances. Prerequisites: one course in oral interpretation; one course in fictional literature.

TAI 571 Oral Interpretation of Poetry 3(3-0)
Specialized study of poetry. Prerequisites: one course in oral interpretation and one course in poetic literature.

TAI 572 Special Topics in Oral Interpretation 1-9(Spec)
Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisite: one course in oral interpretation and/or a major in English.

TAI 573 Seminar: Interpretative Reading 3(3-0)
History of the art of interpretative reading, its current theories and possible trends. Prerequisite: one course in interpretative reading.

TAI 574 History of Drama and Theatre I 3(3-0)
Development of drama and theatre in Western 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; AMD 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. Prerequisites: Permission of Instructor.

TAI 588 Contemporary Theatre 3(3-0)
Development of drama and theatre 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(1-0)
An on-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)
Bradford L. Swartz, 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 Bahler, 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

Kathryn Glynn, Clinical Supervisor, CCC-A, M.A. Gallaudet University, Au.D. Salus University. Auditory diagnostics and amplification, electrophysiology, vestibular testing

Nicole Hacker, Director of Clinical Instruction and Audiological Services; CCC-A; Au.D. Central Michigan University. Pediatric diagnostics, cochlear implants, clinical supervision, administration and regulatory issues in audiology

Barbara Jackson, Clinical Supervisor, CCC-A, Au.D. Central Michigan University. Cochlear implants, amplification and educational audiology

Theresa Jones, Director of Clinical Instruction and Services in Speech-Language Pathology Services; CCC-SLP; M.S., Howard University. Infant-toddler specialization, early intervention, sensory integration, pediatric traumatic brain injury, voice, multidisciplinary and transdisciplinary therapy

Mark Lehman, Professor; 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

Suzanne Woods, Associate 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 Pietranda-Bissell, Adjunct 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

Mary Beth Smith, Adjunct Faculty; CCC-SLP, M.A., Michigan State University. Phonology, autism

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, Associate Professor; CCC-SLP; Ph.D., University of Nebraska - Lincoln. Child language disorders, augmentative and alternative communication, literacy

Bradford L. Swartz, Associate Professor and Department Chairperson; 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

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 preschool 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.

Each semester, 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 College of Graduate Studies guarantees admission. The number of students admitted each fall is governed by the number of available openings in the program.

Scholarships
CDO-SPS 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. Ecklesley 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. Ecklesley Scholarship. Application may be made through the Department of Communication Disorders.
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
Minimum Total for Graduation: 54 hours

### Admissions Requirements, Retention & Termination Standards

#### Admission Requirement Snapshot

**Entrance Exam:** GRE
- GPA: 3.0 (see admission standards)
- Application Deadline: January 15 (Fall)

**Exempted Countries:** TOEFL required - minimum score of 100
- IBT, 250 CBT, 600 PBT (some exceptions may apply)

*See Admission Requirement Details Below*

**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 directly supervised clinical experience under the supervision of an ASHA certified supervisor during their undergraduate and graduate programs. Of these, a minimum of 325 hours must be completed at the graduate level. Each full-time graduate student will be expected to enroll in clinical practicum each semester. Various clinical duties will be assigned in consultation with the Director of Clinical Services. In addition, graduate students will be expected to participate in the Summer Speech-Language Pathology Clinic 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 that each individual admitted to the program and graduating from of the program must possess in preparation for national certification by the American Speech-Language and Hearing Association. 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. This document can be accessed at: [http://www.cmich.edu/academics/health_professions/docs/Documents/slp_tech_standards.pdf](http://www.cmich.edu/academics/health_professions/docs/Documents/slp_tech_standards.pdf).

**Admission Standards**

Admission to the graduate program in speech-language pathology is a competitive process. Each fall semester, the program accepts approximately 35 students. The number of applicants ranges from 200-300 each year. In order to apply for admission, the student must meet the general university requirements, have a grade point average of 3.00 or higher in the last 60 semester hours of undergraduate credit and a grade point average of 3.0 or higher with no grade lower than a C in the major courses or courses determined by CDO to be communication-disorders related. Over the past decade, those accepted into the program have had a major GPA ranging from 3.40 to 4.00 and a mean of 3.80. Successful applicants have had strong overall and major GPAs, and strong letters of recommendation. (The GRE is a criterion for admission.)

**Capstone Experience**

All speech-language pathology graduate students will complete a “capstone” experience prior to graduation. Students may choose in consultation with an advisor one of the following options:

1. Students will conduct a research project resulting in a thesis study.
2. Students will do a clinical internship at an off-campus site, and participate in a presentation to synthesize and integrate their learning during this experience.
3. Students will conduct a research project resulting in an independent study paper.

**Required Courses (43-52 hours)**

- CDO 513 - Voice Disorders/Laryngectomy Rehabilitation 3(3-0)
- CDO 535 - Augmentative and Alternative Communication 3(3-0)
- CDO 539 - Stuttering 3(3-0)
- CDO 638 - Seminar: Adult and Pediatric Swallowing and Feeding Disorders 3(3-0)
- CDO 704 - Language Disorders in Preschool Children 3(3-0)
- CDO 708 - Language Disorders in School-Age Children 3(3-0)
- CDO 714 - Motor Speech Disorders 3(3-0)
- CDO 717 - Aphasia & Related Neuromotor Disorder 4(4-0)
- CDO 730 - Experimental Studies in Communication Disorders 3(3-0)
- CDO 734 - Acoustic Phonetics 3(3-0)
- CDO 749 - Clinical Practicum in Speech-Language Pathology or Audiology 1-15(Spec)

**Note 1:** CDO 513, 535, and 539 are required only if the student has not taken an equivalent course at the undergraduate level.

**Note 2:** Fifteen (15) hours of CDO 749 is required. Each full-time graduate student is expected to enroll in clinical practicum each semester for three (3) credits. Participation in the Summer Speech-Language Pathology 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.

(Continued)
Additional Requirement
Select one of the following capstone experiences:

Plan A
Required Course (6 hours)
CDO 798 - Thesis 1-6(Spec)

Plan B: Option 1
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 - Traumatic Brain Injury 2(2-0)
- 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.

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 clinical) in any one semester.
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.

Admission Requirements, Retention & Termination Standards

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.
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 Early 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 513 Voice Disorders/Laryngectomee Rehabilitation 3(3-0)
This course covers etiology, types, evaluation, and treatment of persons with voice disorders and laryngectomies. Prerequisites: 30 hours of undergraduate coursework in CDO or admission to the graduate program in SLP.

CDO 535 Augmentative and Alternative Communication 3(3-0)
Assessment and treatment of communications disorders resulting from multiple deficits originating from neurological, neuromuscular, sensory, and cognitive disorders. Verbal and non-verbal management approaches are considered. Prerequisites: 30 hours of undergraduate coursework in CDO or admission to the graduate program in SLP.

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 539 Stuttering 3(3-0)
Overt and covert characteristics of stuttering behavior including their prevention, etiology, and modification. Prerequisites: 30 hours of undergraduate coursework in CDO or admission to the graduate program in SLP.

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(Spec)
Anon-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 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 Au.D. Program. This course is approved for offering in a distance learning format.

CDO 702 Infant-Toddler Communication: Assessment and Intervention 2(2-0)
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 communication and language delays in children, with focus on three to five year olds. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 705 Traumatic Brain Injury 2(2-0)
An introduction to traumatic brain injury with emphasis on medical aspects, behavioral sequelae, and cognitive-communicative disorders related to closed head injury. Prerequisite: Admission to the graduate program in speech-language pathology.

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 etiology, 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 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 & Related Neurogenic Disorder 4(4-0)
Study of theoretical framework and intervention procedures for aphasia and communication disorders in other neurogenic disorders including right hemisphere dysfunction, dementia, and traumatic brain injury. Prerequisite: 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 730 Experimental Studies in Communication Disorders 3(3-0)
Selection of a research topic: study of designs, scaling methods, statistics and computer analysis of research in audiology and speech-language pathology; preparation of a prospectus; and critical review of research literature in communication disorders. Prerequisite: admission to the graduate program in speech-language pathology or audiology.

CDO 731 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 734 Acoustic Phonetics 3(3-0)
Operation 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 736 Phonological Disorders in Children 3(3-0)
Advanced study of the diagnostic and treatment phonological disorders in children. Prerequisite: 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 practice 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 Au.D. (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 audiologic 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, AMLR, ECochG, 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.

CDO 783 Advanced Electrophysiological and Vestibular Techniques in Audiology 3(3-0)
Study of advanced electrophysiological and vestibular techniques in audiology such as ECoG, AMLR, ALR, P300, ENOG, cVEMP, oVEMP, SVV, VRT and high frequency vestibular tests. Prerequisites: admission to the Au.D. program. This course may be offered in an online or hybrid format.

CDO 785 Auditory Processing Disorders 3(3-0)
Principles underlying neuroanatomic and neurophysiologic bases of auditory processing and auditory processing disorders, behavioral and electrophysiologic assessment strategies, and management of auditory processing disorders. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 790 Advanced Independent Study 1-9(Spec)
Intensive study of a subject area initiated by the student and guided by faculty member or faculty committee. Prerequisites: permission of advisor and instructor and completion of CDO independent study form. Students can take no more than 3 credits at one time.

CDO 795 Internship 3-6(Spec)
Full-time clinical experience with an approved supervisor in hospital, private practice, school, or other appropriate setting. CR/NC only. Prerequisites: admission to the graduate program in speech-language pathology.

CDO 798 Thesis 1-6(Spec)
CR/NC only.

CDO 849 Advanced Clinical Practicum: Audiology 4-12(Spec)
Clinical practicum which encompasses the entire range of audiological procedures including rehabilitation. Prerequisites: admission to the Au.D. program, completion of CDO 769.

CDO 853 Psychosocial Aspects of Hearing Loss 3(3-0)
An investigation into the advising role of the audiologist with persons having hearing impairment. Psychological, social, and vocational aspects of hearing loss are emphasized. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 863 Professional Issues in the Practice of Audiology 3(3-0)
Issues of a professional nature which impact on the practice of audiology. Topics include accreditation/certification, quality assurance, reimbursement, establishing a private practice, and professional liability. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 898 Doctoral Project 1-12(Spec)
Doctoral project. This course is approved for offering in a distance learning format. CR/NC only. Prerequisites: admission to the Au.D. program, CDO 849, CDO 898.
Course Descriptions: ASL

ASL 510 ASL Linguistics 3(3-0)
This course will examine the linguistics of American Sign Language. Topics will include the form, content and use of ASL; the relationship between ASL, spoken languages, and other signed languages; ASL acquisition; and historical change in ASL. Prerequisites: ASL 100, ASL 202.

ASL 590 Independent Study 1-4(Spec)
Student-initiated study of a topic related to the ASL minor guided by a faculty member or faculty committee. Prerequisites: ASL 100, ASL 202, permission of instructor.

ASL 594 ASL in Elementary Education 3(Spec)
Students apply their ASL skills and knowledge of Deaf culture by providing ASL instruction in a community educational enrichment program for elementary school children. Prerequisite: ASL 202; ASL 100 or 390; permission of instructor.

ASL 595 Community Placements with Deaf Children and Adults 3(1-3)
Students apply their American Sign Language skills and knowledge of Deaf culture by working in community placements with Deaf children and/or adults. Prerequisites: ASL 202; ASL 100 or 390; and permission of instructor.

ASL 599 Special Topics 1-6(Spec)
Study of a selected topic, specific application, or current issue related to but not covered by the ASL Minor curriculum. Prerequisites: ASL 100, ASL 202, permission of instructor.

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

Neelima Shrikhande, Ph.D., Artificial Intelligence, Computer Vision, Image Processing

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 logaritms, 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

Admissions Requirements, Retention & Termination Standards

Admission Requirement Snapshot

GPA: 3.0 (in the last two years of study)
Entrance Exam: GRE (recommended)
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

GRE scores may be considered in cases where a student is deficient in the above knowledge areas.
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 2.5 in the above-listed courses.

**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 552 - 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:
    - CPS 585 - Applied Data Engineering 3(3-0)
    - CPS 685 - Pattern Recognition and Data Mining 3(3-0)
    - ITC 520 - Foundations of Computer Security 3(3-0)
    - ITC 530 - Mobile Computing 3(3-0)
    - ITC 620 - Information Security and Privacy 3(3-0)
    - ITC 630 - Cloud Computing 3(3-0)
    - ITC 686 - Big Data Analysis 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 procedures outlined in the Thesis, Field Study, or Dissertation section of College of 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.

**ACCELERATED MASTER OF SCIENCE IN COMPUTER SCIENCE**
Undergraduate students in Computer Science can pursue a Master of Science program in Computer Science while still fulfilling the requirements for their Bachelor's degree. The Accelerated Master's Degree Program (AMDP) which was recently approved at CMU allows students to reduce the total number of credits required to complete their undergraduate and graduate level degrees by applying up to 12 credits (500 and 600 level courses) towards graduation requirements on both degree programs.

**Admission Criteria:**
To be eligible for the accelerated program, a student must have completed a minimum of 90 credits (including transfer and/or AP credits) towards a Bachelor's degree, including all University Program requirements. An overall grade point average (GPA) of at least 3.25 is required, as well as a minimum of 3.00 in Computer Science course work. In addition, students must satisfy all requirements for regular admission to the Master's program in Computer Science, with the possible exception of completing CPS 450 and 470 courses, which may be completed during the senior year.

During the fourth year, students will complete 12 credits of graduate level course work (excluding independent study credits) that will be counted towards both the undergraduate and graduate degrees. In addition, students will take either CPS 450 and 470 or 6 hours of CPS electives. Other courses may be taken to complete Bachelor of Science degree requirements. Students will complete the course work required for a Master of Science degree and complete either Plan A or Plan B option by the end of the fifth year.

A sample curriculum for a student who has completed 90 credit hours of undergraduate course work is given below:

**Sample Curriculum for Plan A or Plan B option:**

**Year Four**
- Fall (15 hours):
  - CPS 541 (Elective for BS, required for MS) - 3 hours
  - CPS Elective or CPS 450 - 3 hours
  - Undergraduate Courses - 9 hours
- Spring (15 hours):
  - CPS Elective or CPS 450 - 3 hours
  - Other BS Requirement - 3 hours
  - ITC 510 (Elective for BS, required for MS) - 3 hours
  - CPS/ITC courses for both BS and MS - 6 hours
- Summer (3 hours):
  - UG Courses - 3 hours (if necessary?)

**Year Five**
- Fall (12 hours):
  - Requirements for MS* - 12 hours
- Spring (12 hours):
  - CPS 650 (Required for MS) - 3 hours
  - Requirements and Electives for MS* - 12 hours

*Note: Students may complete CPS 798 - 6 hours over the course of two semesters for the MS Plan A Option.

**Graduate Certificate in Data Mining**
This is an interdepartmental graduate certificate. Please check the index for the page number.
**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 permission of instructor. 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. CISC versus RISC debate. Parallel/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. Aplotter 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)**
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)**

**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, classification, recognition, and their applications in data mining. Data mining process and techniques, including data transformation, supervised induction, association discovery, and conceptual clustering. Prerequisites: CPS 410, MTH 223, STA 282, STA 382 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 towards 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)
• Study of modern security concepts and major paradigms of computer security. Focus on core concepts and major paradigms in computer security. 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 Analysis 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 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

Ellen Armbruster, Ph.D., Professional Counseling

Allison Arnekran, Ph.D. (ABD), Professional Counseling

Dawn Decker, Ph.D., Cognitive Impairment

J. Rico Drake, Ph.D., Professional Counseling

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

Twine Parmer, 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 Counseling 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 Counseling Education earn a Master of Arts degree in Counseling.

Faculty members include licensed professional counselors. Full-time counseling 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

Entrance Exam: MAT

Application Deadline: See page 25 for more information.

See Admission Requirement Details Below

Note: See the Global Campus Bulletin for Admission Requirements and Program Requirements for Global Campus students.

Admission Requirements

• In addition to submitting an application, all transcripts, and a written statement of purpose and general plans for graduate study, the applicant must arrange for a recent (not more than five years old) Miller Analogies Test (MAT) score to be sent directly to the Department of Counseling and Special Education.

• The MAT is available through testing centers such as CMU’s Computer-based and Placement Testing Center, and at other sites. Further information may be found at www.milleranalogies.com.

• The written statement should consist of a 500 word description of the following: (1) an explanation of why the applicant wants to enter the Counseling program, (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.
• The applicant’s undergraduate cumulative undergraduate grade point average (2.7 minimum), statement of purpose, a general plan for graduate study, and MAT score are all considered in determining admission. All application materials and MAT score must be received in the Department of Counseling and Special Education before a decision will be made whether to recommend the applicant for admission.

• An applicant chosen in the screening process will be admitted to the program on a conditional basis. To be eligible for regular admission status, the student must first complete a minimum of 10 semester 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 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 Human Development Clinic 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:
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 (3 hours)
Select one of the following:
CED 502 - Student Development in Higher Education 3(3-1)
CED 503 - Introduction to Community Agency Counseling 3(3-0)
CED 504 - Introduction to School Counseling 3(3-0)

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

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)
Admission Requirements, Retention & Termination Standards

1. Admission is through the College of Graduate Studies. 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.

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/CE D 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)
SPE 789 - Behavioral and Curricular Interventions for Individuals with Mild Disabilities 3(3-0)
SPE 790 - Seminar: Investigations and Solutions 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 College of 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.

(Continued)
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 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 course 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; role 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)
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(3-0)
Selection, evaluation, functions, and interpretation of tests in intelligence, achievement, aptitude, personality, and interests. Emphasis on tests appropriate to the students’ 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 the 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.

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 750  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 751  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 755  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.

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; PSY 310; 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 impairments. 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 grade of C or better; SPE 322, SPE 323 with grades of C+ or better; PSY 310; 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, SPE 323, SPE 324, SPE 519 and SPE 521 with grades of C+ or better; admission to Teacher Education; PSY 310.

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 programming 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, stressing 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 is approved for offering in a distance learning format. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and 323 with grades of C+ or better; PSY 310; 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, SPE 323 with grades of C+ or better; PSY 310; 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, SPE 323, SPE 324, SPE 578, and SPE 579 with grades of C+ or better; admission to Teacher Education; PSY 310.

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 PSY 220 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)
An on-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 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. More than 3 credits permitted only rarely. Prerequisites: department chairperson and instructor approval.

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 785, 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.

**Course Descriptions: GEL**

**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 new 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 130; or graduate Status in a CST 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.

See the College of Business Administration for information on the Master of Business Administration (MBA).

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.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

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<tr>
<th>GPA</th>
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<td>July 1 (Fall), Oct. 1 (Spring)</td>
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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

- 12 hours of courses approved by an advisor, inclusive of cognate courses - 18 hours.
- 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.
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 515 Collective Bargaining and Labor Law 3(3-0)
Development of various phases of labor law, especially under statutes such as the Wagner Act, Taft-Hartley Act, and Landrum-Griffin Act. Prerequisites: ECO 202 or ECO 203. Recommended: ECO 201 or ECO 204.

ECO 532 Economic Forecasting 3(3-0)
Nature and causes of economic fluctuations. Methods of predicting price levels and economic activity. Prerequisites: ECO 201 or ECO 204; ECO 202 or ECO 203.

ECO 535 Fundamentals of Mathematical Economics 3(3-0)
Application of mathematical techniques in economics. Emphasizes marginal analysis, market models, comparative static equilibrium, and maximization. Prerequisites: ECO 365; MTH 132 or MTH 217 or graduate standing in Economics.

ECO 572 International Monetary Economics 3(3-0)
International monetary and financial markets are studied. Topics include exchange rate policy, international Capital Flow and purchasing power parity theory. Prerequisites: ECO 372.

ECO 585 Econometrics 3(3-0)
Thorough treatment of statistical estimation methods and their properties for simultaneous equation systems. Also includes discussions of types of systems, solution methods and identification. Prerequisites: STA 580 and MTH 132; or graduate standing in Economics.

ECO 590 Seminar Readings 1-3(Spec)
Elective honors course for majors or minors in economics. Recommended: 12 hours of economics with B average.

ECO 591 Seminar Research Studies 1-3(Spec)
Independent study on special problems for majors and minors in economics. Prerequisite: permission of instructor. Recommended: 9 hours of 300- to 500-level economics.

ECO 597 Special Studies in Economics 1-3(Spec)
Experimental courses to cover material of special interest to both undergraduates and graduates not covered by courses in the regular curriculum. Prerequisite: permission of instructor.

ECO 600 Introduction to Advanced Economic Analysis 3(3-0)
Provides the analytical tools necessary for graduate study in economics; firms, households, pricing, wages, distribution, market failure, income determination, and economic growth. Not open to Economics graduate students or undergraduate majors or minors.

ECO 601 Advanced Environmental Economics 3(3-0)
The use of price theory and benefit cost analysis to understand environmental problems and policies. Examination of property rights, regulations, taxes, and subsidies.

ECO 603 Economic Effects of Urbanization and Technology 3(3-0)
Analysis of the economic effects of the urbanization process, emphasizing solutions to the problems of urbanization and side effects of policy actions.

ECO 606 Seminar in Economic History 3(3-0)
Diverse economic experiences of advanced nations since Industrial Revolution. Applies theoretical and institutional approaches to economic history.

ECO 610 Seminar in Economic Thought 3(3-0)
Evolution of economic thought during the past 25 centuries.

ECO 614 Seminar in Labor Economics 3(3-0)
Operation of labor markets in utilizing and allocating manpower. Government measure to facilitate such utilization and allocation. Influence of discrimination.

ECO 616 Advanced Microeconomic Theory 3(3-0)
Theories of consumer behavior; cost; optimum decision-making, prices, welfare economics, general equilibrium, and income distribution.

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

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 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 the specialized or experimental interests. Topics will vary from semester to semester.

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 theories 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)
Economic 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.
DEPARTMENT OF EDUCATIONAL LEADERSHIP (EDL, DOL)
College of Education and Human Services

Anne Hornak, Chairperson
334 EHS Building, (989) 774-3204

Frimpomaa Ampaw, Ed.D., Quantitative Analysis, Educational Finance
Eric Buschien, Ed.D., Leadership Development and Civic Engagement
Mark Deschaine, Ph.D., K-12 Leadership
Anne Hornak, Ph.D., Higher Education Administration, Ethics, Student Affairs
Benjamin Jankens, Ed.D., Charter School Leadership, School and Community Relations
Matthew Johnson, Ph.D., Leadership Theory, Student Affairs, Student Development Theory
Daniel Kaczynski, Ph.D., Qualitative Analysis, Program Evaluation
Barbara Klocko, Ph.D., Teacher Leadership, PK-12 Administration
Sarah Marshall, Ph.D., Student Affairs Administration, Work-Family Issues
Regina Umpstead, J.D., Ph.D., Educational Law, Educational Policy

David E. Whale, Ed.D., Secondary Administration and Curriculum, Educational Technology

The department provides courses and programs for graduate students preparing for leadership positions in schools, institutions of higher learning, and other community-based human service organizations. Opportunities for advanced specialized study are available in addition to pre-service preparation programs. The programs and courses in educational administration and leadership are:

- Graduate Certificate in College Teaching
- M.A. in Higher Education Administration
- M.A. in School Principalship
- M.A. in Teacher Leadership
- Specialist in Education: General Educational Administration
- Doctor of Education in Educational Leadership
- Ph.D. in Educational Leadership

Students intending to teach in a public school system or academy should realize that s/he must have a Michigan teaching certificate. A Master’s of Arts in Educational Leadership does not substitute for teacher certification.

Graduate Certificate in College Teaching

Minimum Totals for Graduation: 15 hours
The Graduate Certificate in College Teaching is designed to prepare students for a faculty teaching career in post-secondary education. The 15-credit hour certificate is intended for graduate students who desire preparation and training in the area of college teaching. Courses eligible for the certificate program include an assortment of topics relevant to teaching in higher education such as student background (adult learners and traditionally-aged students), classroom teaching theory and strategies, online/hybrid or distance education, the faculty role, and an internship in college teaching.

Students enrolled in the Graduate Certificate in College Teaching will take 15 credit hours, selected with their advisor from the courses listed below. Students with little or no teaching experience will be highly encouraged to complete an internship in college teaching (EDL 697).

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 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.

Admission Requirements, Retention & Termination Standards

- Undergraduate degree with cumulative GPA of 3.0 or higher from an accredited institution.
- Official transcripts from all undergraduate and graduate schools you have attended.
- Current resume identifying training, experience, and professional accomplishments. A cover page should indicate this is intended for the Graduate Certificate for College Teaching.
- Applicants must meet the requirements for admission to the College of Graduate Studies.
- 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.

Admission Requirement Snapshot
GPA: 3.0
Entrance Exam: N/A
Intern/1 Application Deadline: July 1 (Fall), Oct. 1 (Spring)
See Admission Requirement Details Below

1. Applicants must meet the requirements for admission to the College of 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:

- Undergraduate degree with cumulative GPA of 3.0 or higher from an accredited institution.
- Official transcripts from all undergraduate and graduate schools you have attended.
- Current resume identifying training, experience, and professional accomplishments. A cover page should indicate this is intended for the Graduate Certificate for College Teaching.
- Applicants must meet the requirements for admission to the College of Graduate Studies.
- 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.
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)
Higher Education Administration
EDL 600 · Research for Educational Leadership 3(3-0)
EDL 636 · Higher Education Law 3(3-0)
EDL 677 · The American College Student 3(3-0)
EDL 757 · Student Development Theory 3(3-0)
EDL 764 · Financing of Higher Education 3(3-0)
EDL 776 · Administration of Higher Education 3(3-0)
EDL 777 · Student Affairs Administration 3(3-0)

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(3-6)
EDL 698 · Master’s Colloquium 3(3-0)

Total: 36 semester hours

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**Master of Arts in School Principalship**

**Minimum Totals for Graduation: 30 hours**

The Master of Arts in School Principalship 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 School Principalship is a nationally accredited program by the Teacher Education Accreditation Council (TEAC).

**Admission Requirements, Retention & Termination Standards**

**Admission Requirement Details Below**

<table>
<thead>
<tr>
<th>GPA: 3.0</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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<tr>
<td>See Admission Requirement Details Below</td>
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</table>

1. Applicants must meet the requirements for admission to the College of 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.

(Continued)
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.

Required Courses I (24 hours)
EDL 600 - Research for Educational Leadership 3(3-0)
EDL 656 - Public School Law 3(3-0)
EDL 660 - Principles of Educational Administration 3(3-0)
EDL 661 - School and Community Relations 3(3-0)
EDL 662 - School Business Administration & Facilities Management 3(3-0)
EDL 663 - Human Resources Administration 3(3-0)
EDL 690 - Administration of School Curriculum 3(3-0)
EDL 699 - Leadership Internship 1-15(Spec)

Note: 3 hours of EDL 699.

Emphasis Area (6 hours)
Select one of the following emphasis areas:

Emphasis Area - Site-Based Leadership (6 hours)
EDL 670 - School-Site Administration 3(3-0)
EDL 773 - Instructional Supervision and Leadership 3(3-0)

Emphasis Area - Charter School Leadership (6 hours)
EDL 645 - Charter School Leadership 3(3-0)
EDL 678 - Emerging Issues and Reform Efforts in Educational Leadership 3(3-0)

Professional Portfolio
Students are required to complete a Professional Portfolio that consists of additional 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.

- Resume - Detailed educational and professional experiences.
- Professional Platform - A series of beliefs and assumptions that expresses what the student believes to be true, possible, and desirable. The platform provides the foundation that guides the student’s thinking and decisions he or she makes about educational leadership issues.
- Supporting Documents - The portfolio also includes relevant documents that the student has created throughout his or her graduate experience. These materials support the student’s platform and serve as key examples of the student’s scholarly work.

Portfolios are developed with the aid of the student’s advisor and are reviewed and assessed during the student’s exit interview.

Total: 30 semester hours

**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**

**Admission Requirements Snapshot**

<table>
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<tr>
<th>GPA</th>
<th>Entrance Exam: N/A</th>
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<tbody>
<tr>
<td>3.0</td>
<td>Internat'l Application Deadline: July 1 (Fall), Oct.1 (Spring)</td>
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</table>

See Admission Requirement Details Below

1. Applicants must meet the requirements for admission to the College of Graduate Studies.
2. Regular admission in the program requires a 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:
      • 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 (12 hours)
EDL 600 - Research for Educational Leadership 3(3-0)
EDL 651 - Program Review and Evaluation 3(3-0)
Specialist in Education (Ed.S.) in General Educational Administration

Minimum Totals for Graduation: 30 hours

The Specialist in Education (Ed.S.) in General Education Administration is an advanced degree program that prepares professional educators with instructional and leadership skills beyond the master’s level of competence. The purpose of this degree is to extend the academic foundation, skills, and abilities of educational leaders and to build 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 complete the Administrative Leadership K-12 concentration may apply to the Michigan Department of Education for administrative certification.

Admission Requirements; Retention & Termination Standards

Admission Requirement Snapshot

GPA: 3.0  
Entrance Exam: N/A  
Internatl’l Application Deadline: July 1 (Fall), Oct.1 (Spring)  
See Admission Requirement Details Below

Applicants for the Educational Specialist degree must have three years of experience in an educational setting.

Admission
1. Applicants must meet the requirements for admission to the College of Graduate Studies.
2. Applicants must have completed a master’s degree in education or related field.
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 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.

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’s packet, and it must be approved before a student is granted regular admission.

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 779 - Thesis 1-6(Spec)
Plan B: Field Based Project
EDL 699 - Leadership Internship 1-15(Spec)
EDL 779 - 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 Requirements, Retention & Termination Standards

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<tr>
<th>Admission Requirement Snapshot</th>
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<tbody>
<tr>
<td>Masters’ GPA: 3.5</td>
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<tr>
<td>Entrance Exam: GRE</td>
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<tr>
<td>Application Deadline: July 1</td>
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</tbody>
</table>

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 College of 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 familiar with your academic and scholarly work.
2. Personal Statement: A two- or three-page typewritten statement describing your educational and professional goals as they relate to pursuing the Doctor of Education at Central Michigan University.

3. A description of a professional problem the applicant has encountered and an analysis of the resolution of that problem.
4. GRE Score: An official score report from the Graduate Record Examination (GRE) earned within the last five years.
5. TOEFL Score: If your native language is not English, submit an official score report from the Test of English as a 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.
6. Current Resume or Vita
7. Signed Declaration of Commitment (found on EDL website)
8. Participation in Doctor of Education Interview/Group Process

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.

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.

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 coursework 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)

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 889 - Doctoral Seminar 3-6(Spec)

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.

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. Forty-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.

ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS  
Admission Requirements Snapshot  
Master's GPA: 3.5  
Entrance Exam: GRE  
Priority Deadline: Feb. 1 (for international students, fellowships, and assistantships)  
Regular Application Deadline: April 1 (Fall only)  
See Admission Requirement Details Below

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 the Graduate Record Exam.

Review of complete application begins April 1 and continues until the cohort is filled. A completed application packet will include the following materials:  
To the College of 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 doctoral Letter of Recommendation Form (found on the department website) and submit recommendations from three individuals familiar with your academic and scholarly work.  
2. Personal Statement: A two- or three-page typewritten statement describing your educational and professional goals as they relate to pursuing the Ph.D. at Central Michigan University.  
3. GRE Score: An official score report from the Graduate Record Examination (GRE) earned within the last five years.  
4. 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. TOEFL Exempt countries list: http://www.cmich.edu/academics/graduate_studies/landing_pages/Documents/TOEFL-list.pdf  
5. Current Resume or Curriculum Vita  
6. Signed Declaration of Commitment (found on EDL website): After reviewing the credentials of the applicants, the Doctoral Program Committee will select candidates 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.

(Continued)
Program Requirements

Progress through the program is based upon obtaining satisfactory grades (a 3.25 GPA average overall), passing the Preliminary Progress Assessment (PPA), written and oral comprehensive exams, dissertation concept paper and completing a doctoral dissertation.

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 (18 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 816 - Social Justice in Education 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)

Concentrations (18 hours)

There are two concentration areas in the program and 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.

Select one of the following:

Concentration 1: K-12 Leadership (18 hours)
EDL 766 - Advanced Educational Law 3(3-0)
EDL 767 - Public School Finance 3(3-0)
EDL 775 - Educational Policy Analysis 3(3-0)

Plus nine hours of electives to be chosen in consultation with program advisor.

Concentration 2: Higher Education Leadership (18 hours)
EDL 764 - Financing of Higher Education 3(3-0)
EDL 768 - Advanced Higher Education Law 3(3-0)
EDL 876 - Higher Education Policy 3(3-0)

Plus nine hours of electives to be chosen in consultation with program advisor.

Preliminary Progress Assessment (taken after the completion of first 15 credits)

Ph.D. students are required to complete Preliminary Progress Assessment (PPA) upon completion of their first year in the doctoral program (e.g., upon completion of 15 credits following their matriculation into the doctoral program). The PPA will be scheduled annually in August as students begin their second year of doctoral work. Students will be asked to submit a 10-15 page sample of their written work (e.g., revised class paper, research proposal, conference paper, manuscript for publication), which will be reviewed by three faculty members, including the students’ advisor.

Comprehensive Exam

Within one year of completing all coursework (except EDL 898), a Ph.D. student must successfully pass a comprehensive exam. The student’s dissertation committee evaluates the comprehensive exam. The comprehensive examination for the Ph.D. entails developing a research prospectus that includes the following components: an explanation of the research problem, a series of research questions and/or hypotheses, a review of the literature and related theory, and a description of the method.

Dissertation (15 hours)

Candidates will undertake original research relevant to the program focus. Completion of the dissertation will require a minimum of 15 credits of EDL 898 Dissertation. The course description includes: design and complete the dissertation including data collection, analysis, written report, and oral defense.

EDL 898 - Dissertation 1-15(Spec)

Total: 66 semester hours

Course Descriptions: EDL

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 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)
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)
Investigation 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 & Facilities Management 3(3-0) An exploration of school business administration and facilities management concepts, with emphasis on school-site administration. This course may be offered in an online or hybrid format.

EDL 663 Human Resources Administration 3(3-0)
The determination of need, satisfaction of need, and means of securing efficient human resource service. Emphasis on environmental factors essential to efficiency. This course is approved for offering in a distance learning format. Prerequisites: See Course Search and Registration.

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 670 School-Site Administration 3(3-0)
Current theories, principles, and practices relative to the organization, administration, and operation of schools. 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)
Learners will incorporate 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 introductory examination 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 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, student develops 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.D. 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 711 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 functions of school district management with special emphasis on the role of the superintendent and other administrators with district-wide responsibilities.

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 763 The Academic Profession 3(3-0)
Emphasizes 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)
A short history and consideration of problems relating to taxation, the budget, local millage, school building bond issues and state aid.

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 collective bargaining as it relates to education. Prerequisite: Graduate Status.

EDL 770 Advanced Elementary School Leadership 3(3-0)
Investigation and in-depth study 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. Prerequisites: EDL 600 and EDL 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, motivation, and leadership. This course may be offered in an online or hybrid format. Prerequisites: Admission to the doctoral program in Educational Leadership.

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 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. Prerequisites: completion of doctoral coursework.

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/Engi_Tech

Daniel Chen, Ph.D., Mechanical Engineering/CAD & CAE  
Frank Cheng, Ph.D., Industrial Robotics, Automation  
Brian DeJong, Ph.D., Mechanical Engineering  
Qin Hu, Ph.D., Electrical Engineering  
Toiga 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 Yelamarthi, 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.

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**Master of Arts (M.A.) in Industrial Management and Technology**

Minimum Totals for Graduation: 30 hours

The Master of Arts in Industrial Management and Technology is designed to provide opportunities for initial or continued professional development for individuals in the occupational areas of industrial supervision, industrial management, industrial production, or industrial technology.

**ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS**

**ADMISSION REQUIREMENT SNAPSHOT**

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

To be admitted to study on this degree, the student must meet the general requirements for admission to the College of Graduate Studies. This program is open to students with undergraduate degrees in all related fields.

**Degree Requirements**

**Required Courses I (9 hours)**  
IET 500 - Production Concepts 3(3-0)  
IET 502 - Computer Applications in Industry 3(3-0)  
plus three hours of graduate statistics.

**Required Courses II (2-6 hours)**  
Select one of the following:  
IET 791 - Independent Research 2-6(Spec)  
IET 798 - Thesis 1-6(Spec)  
The student must write a thesis or two graduate file papers.

In addition, courses should be selected in consultation with the advisor from Required Courses III, IV and V:

**Required Courses III (4-10 hours)**  
*Industry*  
IET 500 - Computer Applications in Industry 3(3-0)  
IET 524 - Technology and Environment 3(3-0)  
IET 597 - Special Studies 1-6(Spec)  
IET 625 - Industrial Internship 2-6(Spec)  
IET 694 - Problems in Management and Technology 1-6(Spec)  
IET 697 - Special Studies 1-6(Spec)

**Required Courses IV (6-10 hours)**  
*Management & Supervision*  
IET 500 - Production Concepts 3(3-0)  
IET 501 - Application of Industrial Management Principles 3(3-0)  
IET 597 - Special Studies 1-6(Spec)  
IET 636 - Leadership Internship 2-6(Spec)  
IET 694 - Problems in Management and Technology 1-6(Spec)  
IET 697 - Special Studies 1-6(Spec)

**Required Courses V (3-11 hours)**  
*Research*  
IET 597 - Special Studies 1-6(Spec)  
IET 694 - Problems in Management and Technology 1-6(Spec)  
IET 697 - Special Studies 1-6(Spec)  
IET 791 - Independent Research 2-6(Spec)  
IET 798 - Thesis 1-6(Spec)  
plus three hours of graduate statistics.

**Specialization (2-12 hours)**  
Courses selected should focus on the student’s specialty.

**Electives (0-15 hours)**  
Students can take courses outside the School of Engineering and Technology which strengthen their degree program. Courses may be selected from such academic areas as business, mathematics, computer science, industrial psychology or sociology. Students must receive approval from an IET advisor prior to taking departmental or nondepartmental courses for their graduate degree program.

Total: 30 semester hours
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 patterns depending on the manager’s level in the organization and functional responsibilities. This course may be offered in an online or hybrid format. Prerequisites: STA 282 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.

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 implication 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 pedagogy to provide K-12 students with meaningful career awareness, exploration, and preparation experiences utilizing industrial materials, tools, and processes. Prerequisite: junior, senior or graduate status in teacher education.

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: a signed authorization.

IET 561 Light Frame Construction Workshop 3(0-6)

IET 567 Construction Safety 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.

IET 591 Construction Management 3(3-0)
A comprehensive study of construction management standards, practices, and procedures with emphasis on the legal aspects of the private, federal, and state construction industries. Prerequisites: IET 361, IET 561.

IET 597 Special Studies 1-6(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.

IET 602 Current Concepts of Industrial Education 2(2-0)
For teachers and administrators who are interested in the role of industrial education. Problems and controversial issues are discussed.

IET 610 Advanced Quality Management 3(3-0)
Applications of quality concepts and the utilization of statistics in manufacturing and industrial settings. Includes quality concepts applied to conceptual design, detailed design, and production. Prerequisite: STA 580.

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

IET 620 Advanced Materials 3(2-2)
This course covers advanced topics in industrial materials. Topics include material properties, material selection, material testing and nanotechnology. This course may be offered in an online or hybrid format. Prerequisite: IET 501 or IET 550.

IET 625 Industrial Internship 2-6(Spec)
Experience in industry covering its general functions and/or specific experiences in a technical area. CR/NC only. Prerequisite: departmental permission.

IET 633 Seminar: Industrial Education 3(3-0)
Review current philosophies, concepts, and trends in industrial education programs related to career awareness, exploration, and preparation opportunities for students, including those with special needs.

IET 634 Advanced Safety Management 3(3-0)
This course covers advanced topics in occupational health and worker’s health protection. Prerequisite: IET 527.

IET 635 Curriculum Development: Industrial Education 3(3-0)
Develop curriculum and instructional materials designed to maximize teaching effectiveness, enhance cooperative teaching relationships, and individualize instruction for all students including those with special needs.

IET 636 Leadership Internship 2-6(Spec)
Supervised professional experiences in association with successful practitioners in a given area or field. CR/NC only. Prerequisite: coordinator’s permission.
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 232; 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)
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)
Thesis research supervised by an engineering faculty. May be repeated as needed. Prerequisites: EGR 600; Graduate Student in Engineering.

Course Descriptions: TEC

TEC 600 Introduction to Technology 3(3-0)
The study of technology with an emphasis on the technical and sociocultural dimensions of energy, transportation, communication, and production systems.

TEC 700 Readings in Technology 3(3-0)
A critical analysis of the literature addressing the nature and construct of technology as a major discipline and area of human inquiry. Prerequisite: TEC 600.
DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

(ENG)

College of Humanities and Social & Behavioral Sciences

Nicole Sparling, Chairperson
215 Anspach Hall, (989) 774-3171

Joseph Sommers, 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
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 Kreth, Ph.D., Technical Writing
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
Nicole Sparling, Ph.D., Latin American and World Literature
William Spruiell, 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 English 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

Minimum Totals for Graduation: 30 hours

English Language and Literature

Required Courses I (3 hours)

Select one of the following:

- Literary Criticism
  - ENG 535 - History of Literary Criticism 3(3-0)
  - ENG 636 - Seminar in Critical Problems 3(3-0)

Required Courses II (3 hours)

Select one of the following:

- Language or Linguistics
  - 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

(Continued)
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
Intern'l 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
Select one of the following:
ENG 601 - Graduate Composition 3(3-0)
ENG 602 - Research Materials and Methods 3(3-0)

Required Courses IV (3 hours)
One 600-level seminar in literature

Required Courses V (3 hours)
Craft Courses
Select one of the following:
ENG 694 - The Craft of Fiction 3(3-0)
ENG 695 - 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 in 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

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

ADMISSION REQUIREMENT SNAPSHOT

GPA: 3.0 (and 3.0 in major)  Entrance Exam: N/A
Intern'l 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.

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.

Admission Requirements, Retention & Termination Standards

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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 714 - 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 3-9(Spec)

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

Admission Requirements, Retention & Termination Standards

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</tr>
<tr>
<td>See Admission Requirement Details Below</td>
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</tbody>
</table>

To be admitted into the M.A. TESOL program, a student normally should have an undergraduate major or minor in English, linguistics, language arts, reading or a foreign language, with a grade point average of at least 3.0 in his or her major or minor and a cumulative average of at least 3.0. Applicants with majors in areas not related to language will be considered on an individual basis. In addition, two years of college foreign language study (or its equivalent) are required.

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.

Degree Requirements

Required Courses (24 hours)

- ENG 571 - Teaching of English to Speakers of Other Languages 3(3-0)
- ENG 574 - TESOL Materials, Assessment, Curriculum 3(3-0)
- ENG 577 - Introduction to Second Language Acquisition 3(3-0)
- ENG 672 - Applied Linguistics in Written Communication 3(3-0)
- ENG 673 - English Phonology for Language Teachers 3(3-0)
- ENG 674 - English Grammar for Language Teachers 3(3-0)
- ENG 675 - Seminar in English Linguistics 3-9(3-0)
- ENG 690 - Practicum in TESOL 1-3(Spec)

Note: 3 hours of ENG 675 is required. The remaining 3-6 credits for ENG 675 may be taken as elective course credits.

Electives (6 hours)

- ENG 510 - Writing Center Practicum 1-3(Spec)
- ENG 517 - Reading and the English Classroom 3(3-0)
- ENG 573 - Linguistics and Reading 3(3-0)
- ENG 578 - Applied Sociolinguistics 3-3(0)
- ENG 615 - Problems in Teaching English 3(3-0)
- ENG 618 - Empirical Research Methods in English 3(3-0)
- ENG 675 - Seminar in English Linguistics 3-9(3-0)

Total: 30 semester hours

Note: Students must pass a comprehensive examination. A Plan B paper is required.
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)
Examine key issues in writing and teaching writing and provides a mediated, instructional experience for working one-on-one with writing. Prerequisites: Enrolled by instructor permission only.

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)
Rhetorical theory and techniques in print and non-print media.

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)
Research and methodology in the teaching of composition.

ENG 520 Diachronic Linguistics and the History of English 3(3-0)
Theory and methodologies of diachronic linguistics, with a focus on the development of the English language. Prerequisite: Graduate standing or ENG 375.

ENG 535 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. Prerequisite: 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: Tragedy and Problem Plays 3(3-0)
Examination of the development of Shakespearean tragedy and the final plays. Prerequisite: a previous university course in Shakespeare (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: Six hours of American Literature.

ENG 561 European Romanticism 3(3-0)
Comparative exploration of the Romantic movement in literature and philosophy with special attention to Germany and France. Prerequisite: Graduate status or ENGL 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 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; ENG 134 or ENG 234. Recommended:

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, 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 198 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 Europe. 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. 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; and 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, 503, 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)
An 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 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 education and scholarly publications.

ENG 656  Seminar in American Literature 3-9(Spec)
The role of nature, 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 the teaching of English or foreign 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 from 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 hours. Prerequisites: Final one-credit unit requires completion of ENG 571 or 577.

ENG 691  Seminar Writing Fiction 3-6(Spec)
Workshop in fiction writing. May be repeated up to 6 hours. Prerequisite: Admission to M.A. Program in English Language and Literature: 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.
**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. Prerequisites: 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.

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**ENGLISH**

**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-Calo, Ph.D., Spanish
Leila Ennaili, Ph.D., French
Carolina Gutierrez-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 Saturday classes on campus and midweek seminars, to hybrid on-line and study abroad. 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 study abroad portion of 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**

**ADMISSION REQUIREMENT SNAPSHOT**
- GPA: 2.7 (and 2.7 in undergrad Spanish courses)
- Entrance Exam: N/A
- International Application Deadline: July 1 (Fall), Oct. 1 (Spring)
- International Students from Non-TOEFL Exempt Countries:
  - TOEFL 79; IELTS 6.5 (some exceptions may apply)
- 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 with a grade point average of at least 2.7 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 at CMU (24 hours)**
- Students must complete 24 credit hours from the following courses:
  - SPN 610 - Studies in U.S. Latino Cultures 3-6(Spec)
  - SPN 620 - Special Topics in Spanish American Literature 3-9(Spec)
  - SPN 630 - Themes in Spanish Peninsular Literature and Cultures 3-9(Spec)
  - SPN 640 - History of the Spanish Language 3(Spec)
  - SPN 650 - Stylistics 3(Spec)
  - SPN 660 - Spanish Phonology 3-6(Spec)

  *Note: The following courses may be taken more than once if the same content is not repeated: SPN 610, 620, and 630.*

**Required Courses in Latin America or Spain (6 hours)**
- All students must have one study abroad experience of 6 hours in a Department-designated site. Select from the following:
  - **Courses in Latin America (6 hours)**
    - Take one course on Spanish-American Cultural Issues (3 credits) and one course in Language or Linguistics (3 credits)
    - SPN 670 - Study Abroad: Latin America 3-6(Spec)
  - **Courses in Spain (6 hours)**
    - Take one course on Spanish Culture (3 credits) and one course in Language or Linguistics (3 credits)
    - SPN 680 - Study Abroad: Spain 3-6(Spec)

**Other Requirements**
- Comprehensive Written Exam
  - To assess the student's knowledge in the subject areas studied, the student must pass a written comprehensive exam that is based on a reading list provided by the faculty.
- 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 the College of 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 the College of 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 at the 400 level; permission of instructor.
- FRN 531 Practicum in French Stylistics 3-3(Spec)
  - Study and analysis of composition and style. Recommended: FRN 315, FRN 316; 6 additional FRN credit hours in courses 300 or above.
- FRN 591 Independent Study 1-6(Spec)
  - Topics of immediate interest in French literature and civilization. Credit hours vary, depending on the subject chosen. Recommended: FRN 202.

**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 591 Special Topics in Spanish 1-9(Spec)
Recommended: Three (3) credits in Spanish at the 400 level.
SPN 595 Theory and Practice of Translation 3(3-0)
Seminar on the historical, theoretical and practical aspects of translation. 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.

SPN 619 Continuing Registration for Final Research Project 1(1-0)
An on-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, morphosyntax, lexis, and semantics. 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 Studies 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 Independent Study 1-3(Spec)
The in-depth study of a topic under the direction of a graduate faculty member who together with a student, designs the format of the study. Prerequisites: completion of SPN 670 and SPN 680.
DEPARTMENT OF GEOGRAPHY
(ESC, GEO)
College of Science and Technology

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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 798) 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

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

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 College of 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 - 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 Geographic Information Systems 3(2-2)

The techniques of computer-assisted analysis and display of spatially ordered geographic data. Students will use vector and raster GIS. Prerequisites: GEO 303, GEO 305.

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. Point pattern analysis. 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)

The integration of land use planning and environmental management concepts and techniques with broader regional economic and environmental planning approaches in the US and abroad. Prerequisites: 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.ESCO 575  Special Studies in Earth Science 1-6(Spec)
Various special topics offered at an advanced undergraduate and graduate level. Topics announced in Course Search and Registration. Prerequisites: permission of instructor. ESC 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 GEO 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.

GEO 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.

GEO 701  Contemporary Spatial Data Management 3(2-2)
Contemporary research and development trends in collection, management, processing and analysis of spatial data. Prerequisites: GEO 503, 508. Recommended: GEO 500, 512.

GEO 797  Directed Research in Geographic Information Sciences 1-6(Spec)
Directed research on advanced topics in Geographic Information Sciences. A prospectus of the proposed research project must be approved prior to registration. Prerequisite: Arrangements must be made with supervisor or project supervisor prior to registration. CR/NC only.

GEO 798  Thesis 1-6(Spec) A written thesis and oral department seminar on the thesis research. Registration requires Plan A thesis prospectus on file in the Geography Department Office. Prerequisite: Thesis prospectus must be approved by the department chairperson prior to registration. CR/NC only.

Course Descriptions: ESC

ESC 575  Special Studies in Earth Science 1-6(Spec)
Various special topics offered at an advanced undergraduate and graduate level. Topics announced in Course Search and Registration. Prerequisites: permission of instructor. ESC 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 geography major. A full-time internship position for one semester may qualify for 12 hours of credit. Identical to GEO 591. Credit may not be earned in more than one of these courses. Prerequisite: permission of program advisor.

ESC 597  Independent Study 1-9(Spec)
Exploration of topics in earth science agreed upon by student and instructor. May be taken only by arrangement prior to registration. Prerequisite: 12 hours of earth science credit; permission of both instructor and department chairperson before registration.
Admission Requirements, Retention & Termination Standards

<table>
<thead>
<tr>
<th>GPA: 3.0</th>
<th>Entrance Exam: GRE</th>
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<tbody>
<tr>
<td>Application Deadlines:</td>
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<tr>
<td>Apr. 1 (Fall), Aug. 1 (Spring), Feb. 1 (Summer)</td>
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<tr>
<td>See Admission Requirement Details Below</td>
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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 College of 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.
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 DHA726 or DHA728. 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.

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 College of 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.

Required Courses I (24 hours)
DHA 700 - Leadership Strategies for Healthcare Policy and Organizations 3(3-0)
DHA 702 - Probability and Statistics for the Health Professions 3(3-0)
DHA 704 - Population Health 3(3-0)
DHA 705 - Seminar in Public Health 1(1-0)
DHA 706 - Quantitative Analysis in Health Organization 3(3-0)
DHA 708 - Organizational Theory and Behavior for the Health Professions 3(3-0)
DHA 709 - Seminar in Health Dynamics: Current Issues, Trends and Change 1(1-0)
DHA 710 - Qualitative Analysis in Healthcare 3(3-0)
DHA 712 - Research Methods and Practice for the Health Professions 3(3-0)
DHA 713 - Seminar in Health Services Research 1(1-0)
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 College of 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.

Required courses II (27 hours)
DHA 714 - Health Systems Thinking and Practice 3(3-0)
DHA 716 - Communication in Health Organizations 3(3-0)
DHA 717 - Seminar in Healthcare Dynamics: Stakeholder Relations 1(1-0)
DHA 718 - Healthcare Law, Regulations and Ethics 3(3-0)
DHA 720 - Health Economics 3(3-0)
DHA 721 - Seminar in Healthcare Policy and Politics 1(1-0)
DHA 722 - Health Informatics 3(3-0)
DHA 724 - Fiscal Responsibility and Accountability for Health Entities 3(3-0)
DHA 725 - Seminar in Strategic Planning for Health Organizations 1(1-0)
DHA 726 - Applied Leadership 3(3-0)
DHA 728 - Comparative Health Systems 3(3-0)

Required Courses III (12 hours)
DHA 898 - Dissertation Design, Implementation, Defense and Reporting 1-12(Spec)

Total: 63 semester hours

Minimum Totals for Graduation: 18 hours

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 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 College of 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 College of 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)
- CM 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)
- PSC 555 - International Law I 3(3-0)
- SOC 506/ANT 506 - Comparative Cultural Systems 3(3-0)
- SOC 514 - Sociology of Health and Illness 3(3-0)
  
  **Note:** If chosen, the elective HSC 516 course must be different from the two required HSC 516 courses above.

**Total:** 15-18 semester hours

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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 214 for Concentrations or to [https://www.cmich.edu/MSA](https://www.cmich.edu/MSA).

Course Descriptions: DHA

DHA 700 Leadership Strategies for Healthcare Policy and Organizations 3(3-0)

This 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 examines statistical and quantitative techniques for problem-solving and decision-making to understand, collect, conduct and evaluate managerial, biomedical and scientific research. Prerequisites: admission to the Doctor of Health Administration program. 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 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 708 Organizational Theory and Behavior for the Health Professions 3(3-0)

Integrating theory and concepts from organizational theory and behavior literature, this course provides applications to improve dynamic healthcare organizations throughout the continuum of care. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.
DHA 709 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)
Theory, concepts and tools used in designing and conducting qualitative health care research, informing policy analysis and facilitating decision support within the practice of health administration. 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 healthcare 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)
Foundational economic and specific health economic theory, trends, market issues and applications are presented to include health insurance and payment theory, practice and applications. 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 the political, legislative and economic forces that influence healthcare policy and regulation development, implementation and consequences of policy and legislation. This course is approved for offering in a distance learning format. CR/NC only. Prerequisites: admission to the Doctor of Health Administration program.

DHA 722 Health Informatics 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 724 Fiscal Responsibility and Accountability for Health Entities 3(3-0)
This course emphasizes financial management and financial operations theory, principles and concepts as they relate to healthcare organizational decision-making and accountability. Prerequisites: admission to the Doctor of Health Administration program. Recommended: DHA 720. 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)
Practical application of leadership principles focused on issues such as governance, decision-making, motivation, empowerment, team building, change management, conflict resolution, accountability, credibility and ethics. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

DHA 728 Comparative Health Systems 3(3-0)
This is a capstone course in the Doctor of Health Administration program with a specific focus on global challenges and comparative effectiveness of health systems. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Doctor of Health Administration Program.

DHA 898 Dissertation Design, Implementation, Defense and Reporting 1-12(Spec)
A description of the capstone research event, the design, implementation, defense and reporting of a doctoral dissertation is outlined. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration Program; successful completion of the Doctoral Program Comprehensive Examination.

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 interorganizational arrangements, health policies, and future solutions.

HSC 508  Education on Sexual Aggression for School/Community 3(Spec)
This course addresses the realities of sexual aggression, and how schools, corporations, and communities can educate their respective populations on these topics. Identical to PES 508. Credit may not be earned in more than one of these courses.

HSC 510  Independent Reading Experience 1-4(Spec)
Individual reading—an experience designed for professional enrichment. 4-hour maximum. CR/NC only. Prerequisite: Permission of Instructor.

HSC 512  Special Topics in Health Education 1-12(Spec)
In-depth consideration of relevant, pertinent health issues.

HSC 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 multicultural and 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 so that a healthier life style is possible.

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)
Computation of vital statistics’ rates and other statistical methods applicable to problems in public health.

HSC 545  Health Planning 3(3-0)
Study of strategic and operational planning methodologies employed by administrators, educators and planners in health care facilities, community health agencies and health programs. Recommended: Junior standing.
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 appointments, 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 improvements specific to health care. Statistical principles and illustrative cases are presented. Recommended: HSC 520.

HSC 575 Exercise Science Clinical Internship 8(Spec)
Application of knowledge and skills in an approved, supervised clinical exercise program internship; minimum of 480 hours required. CR/NC only. Prerequisites: HSC 547, 550, 551 with grades of C or better; undergraduate students must have all courses in the major completed; applications for, and placement in, an internship must be approved in advance by the internship coordinator.

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: HSC 547, 550, 551 with grades of C or better; undergraduate students must have all courses in the major completed; applications for, and placement in, an internship must be approved in advance by the internship coordinator.

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, structures, practice models, role of physicians and other clinicians, capitation cost-accounting, and forms of reimbursement. Prerequisites: HSC 507, 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 provides the capstone professional experience at a health organization and the opportunity to apply professional skills, knowledge and behaviors learned in the classroom. CR/NC only. Prerequisites: HSC 317, HSC 407, HSC 520, HSC 570, HSC 571 for undergraduates; HSC 507, HSC 520, HSC 570, HSC 571 for graduate students.

HSC 598 Nature and Dynamics of Destructive Health Habits 3(3-0)
Etiologies and recovery strategies of substance abuse, eating and sexual disorders and the detrimental health habits which undermine healthy lifestyles. Prerequisites: HSC 235.
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)
An 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 with 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/health 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)
Taken as 3 credits for Substance Abuse option, Counseling Master’s. Taken as 2 credits for Health Education Master’s. Not for students taking HSC 798. CR/NC only. Prerequisite: HSC 670 or CED 695.

HSC 798 Thesis 1-6(Spec)
Complete a thesis directed by a committee in conformity with the university’s thesis guidelines. CR/NC only. Prerequisite: HSC 670 and permission of the instructor.

Course Descriptions: HSL

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 issue 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 interrelationship 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.
DEPARTMENT OF HISTORY (HST)
College of Humanities and Social & Behavioral Sciences

Mitchell Hall, Chairperson
Powers Hall 106, (989) 774-3374

Thomas L. Benjamin, Ph.D., Latin America
Jennifer Liu Demas, Ph.D., East Asian history
Lane Demas, Ph.D., African American history
Kathleen Donohue, Ph.D., 20th century, U.S.
Carrie Euler, Ph.D., medieval and early modern England
Solomon Getahun, Ph.D., sub-Saharan Africa
Jennifer R. Green, Ph.D., Civil War and reconstruction
Mitchell Hall, Ph.D., recent U.S.
Timothy Hall, Ph.D., colonial, revolutionary U.S.
Doina Harsanyi, Ph.D., European history, France
Eric Johnson, Ph.D., modern Europe
Stephen Jones, Ph.D., African American history
Tara McCarthy, Ph.D., U.S. women and gender post 1870
William McDaid, Ph.D., Civil War
Timothy O'Neill, Ph.D., modern Europe
Benjamin Ramirez-Shkwagnaabi, Ph.D., Native American history
John Robertson, Ph.D., Ancient Near East and Egypt, Islamic and Modern Middle East
David Rutherford, Ph.D., Renaissance
Stephen P. Scherer, Ph.D., Russia
Gregory Smith, Ph.D., history of ancient Mediterranean world
Catherine Tobin, Ph.D., United States social history, immigration
Jonathan Truitt, Ph.D., colonial Latin American history
Benjamin Weinstein, Ph.D., modern English history

The Department of History offers a Master of Arts degree, a Joint Master of Arts degree, and a Joint Ph.D. in History. The Joint Master of Arts degree and the Joint Ph.D. are offered in association with partner institutions at Erasmus University, Rotterdam, The Netherlands; Friedrich Schiller University, Jena, Germany; the University of Strathclyde, Glasgow, Scotland; and the University of Puebla, Puebla, Mexico.

Master of Arts (M.A.) in History

Minimum Totals for Graduation: 30 hours

The Department of History offers a Master of Arts degree.

An Accelerated program for this degree is available to highly motivated students to accelerate their academic careers by undertaking graduate work toward the traditional Master of Arts degree (not the Joint M.A. in History) concurrently with undergraduate work.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

<table>
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<tr>
<th>Admission Requirement Snapshot</th>
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<td>GPA: 2.7 (and 2.7 in major)</td>
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<td>Application Deadline: July 15 (Fall), Nov. 1 (Spring)</td>
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<tr>
<td>See Admission Requirement Details Below</td>
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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 College of 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 747 - Seminar in Twentieth-Century European History 3-6(3-0)
- HST 756 - Seminar in Twentieth-Century European History 3(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 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 College of 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 (6-18 hours)

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 3-6(3-0)
- HST 603 - Colloquium in U.S. History Since 1865 3-6(3-0)
- HST 711 - Seminar in Colonial and Revolutionary America 3-6(3-0)
- HST 713 - Seminar in the History of Nineteenth Century America 3-6(3-0)
- HST 715 - Seminar in the Civil War and Reconstruction 3(3-0)
- HST 717 - Seminar in the History of Twentieth Century America 3(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.

Total: 18 semester hours

Joint M.A. in History

Minimum Totals for Graduation: 36 hours

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.
3. 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.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

GPA: 3.3

Application Deadline: Jan. 3 (Fall)

See Admission Requirement Details Below
Successful applicants will 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.

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 courses 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

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.

(Continued)
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 admissions requirements of the CMU College of Graduate Studies 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 PhD.

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 grounded 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 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 512 Era of the American Revolution 3(3-0)

Causes of the Revolution, its course, political, social, and cultural changes of the period, and the formation of the Federal Constitution. May be offered as Writing Intensive. Prerequisite: One of HST 110, 111, 301; or graduate status.
HST 513  Era of the Early Republic, 1789-1825 3(3-0)
An investigation of nation-building, the formation of new institutions, ideologies, decision-making, and personalities during the precarious decades following the American Revolution. May be offered as Writing Intensive. Prerequisites: One of HST 110, 111, 301; or graduate status.

HST 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 process of secession, the conduct of war, and the reconstruction of the South to 1877. May be offered as Writing Intensive. Prerequisite: One of HST 111, 320; or graduate status. Recommended: While this course does not require or expect detailed knowledge of the Civil War, students should be broadly familiar with basic periods and developments in nineteenth century America.

HST 516  Emergence of Modern America, 1877-1920 3(3-0)
Social, political, cultural, and economic developments from the end of Reconstruction through the Progressive era. May be offered as Writing Intensive. Prerequisite: HST 112 or 321; or graduate status.

HST 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; or one of 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 111.

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, lab, 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  Athens: 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)
Political, social, and economic change in Europe from the First World War through the Second; emphasis on fascism and the failure of democracy. May be offered as Writing Intensive. Prerequisite: HST 102 or 106 or graduate status.

HST 560  Mind Games 3(3-0)
Students propose, design, and develop role-playing and other face-to-face games for use in the 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 580 Public History 3(3-0)
Discover why public historians are on the cutting edge, preserving and interpreting our heritage as writers, researchers, curators, media personalities, policy analysts, archivists, and more. May be offered as Writing Intensive. Prerequisites: HST 301 and MST 310; or graduate status.

HST 583 Archival Administration 3(3-0)
A practical introduction to archives theory, management, and issues; hands-on learning experience with primary source materials. Prerequisites: HST 301 and MST 310; or graduate standing.

HST 585 Oral History 3(3-0)
An introduction to the methodology and use of Oral History in historical research, interpretation, and documentation. May be offered as Writing Intensive. Prerequisites: HST 301 and MST 310; or graduate status.

HST 590 Readings in History 1-6(Spec)
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 may take 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)
An non-credit course intended for students who have completed all program 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/Middle Eastern 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 650 Colloquium in European History to 1450 3(3-0)
An investigation of historians, their interpretations and methodologies on the major topics and themes 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 methodologies in early modern European history (1300-1789). 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 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 credits, but only if the specific topic and literature change. Prerequisite: Admission to the graduate program in history. Recommended: 6 hours of Latin American history or two years of Spanish or Portuguese.

HST 676 Comparative History of Slavery 3-6(3-0)
An investigation of the history of slavery in a comparative perspective through an analysis of secondary literature. 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 681 Historic Preservation 3(3-0)
Learn why historic preservationists chain themselves to structures, pursue policy-making, 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, MST 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 Colloquium 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)
Primarily 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 through the seventeenth century. 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 766 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)
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.

HST 791 Graduate Research 3-6(Spec)
Prerequisites: 12 hours of junior, senior, or graduate-level history and the 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**  
*(HEV, AMD, 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  
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  
Mikiyasu Hakoyama, Ph.D., Human Development & Family Studies  
Roscelle 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  
Chris Latty, Ph.D., Human Development & Family Studies  
Robert Lee, Dr.P.H., R.D., Human Nutrition  
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  
Francis Tayie, Ph.D., Human Nutrition  
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**

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**Admission Requirements, Retention & Termination Standards**

<table>
<thead>
<tr>
<th>Admission Requirement Snapshot</th>
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<tr>
<td>GPA: 3.0 (in the last 60 hours undergraduate course work)</td>
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<tr>
<td>Entrance Exam: N/A</td>
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<tr>
<td>International Application Deadline: July 1 (Fall), Oct. 1 (Spring)</td>
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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://centrallink.cmich.edu/academics/grad_studies](https://centrallink.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

**Required Courses (12 credit hours)**

- Apparel Merchandising & Design

- Select from the following in consultation with advisor:
  - AMD 500 - Global Apparel Supply Chain Management 3(3-0)
  - AMD 506 - Apparel Product Development 3(3-0)
  - AMD 540 - Anthropometrics and Apparel 3(2-2)
  - AMD 541 - Apparel Presentation Technology 3(2-2)
  - AMD 655 - Textile Product Evaluation 3(2-2)
  - AMD 656 - Apparel Retail Technology 3(3-0)
  - AMD 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.
Thesis or Internship Options (6 credit hours)
Select from the following options:
Plan A - Thesis (6 hours)
AMD 798 - Thesis in Apparel Merchandising & Design
1-6(Spec)
Plan B - Internship (6 hours)
AMD 635 - Advanced Internship in Textiles & Apparel
1-6(Spec)
Total: 33 semester hours

ACCELERATED MASTER OF SCIENCE IN APPAREL PRODUCT DEVELOPMENT AND MERCHANDISING TECHNOLOGY
Advanced undergraduate students majoring in Apparel Merchandising and Design who would like to pursue advanced studies in design, merchandising, product development, and technology relating to the textiles and apparel industry complex may consider an option whereby they can complete their bachelor's degree and a Master of Science in Apparel Product Development and Merchandising Technology in five years. The program requirements on the Accelerated Masters Degree Program are identical to those of the Master of Science in Apparel Product Development and Merchandising Technology, but allow the student to apply 9 credit hours of graduate coursework toward both their bachelor's degree and their Master of Science in Apparel Product Development and Merchandising Technology.

Admission Requirements:
Admission to the Accelerated Masters Degree Program in Apparel Product Development and Merchandising Technology includes meeting the following criteria:
1. The completion of fifteen (15) credit hours in Apparel Merchandising and Design.
2. An overall GPA of 3.5 or a 3.5 GPA in the last 60 hours of coursework.
3. Within 30 student credit hours of graduation.
4. Completion of all university competency requirements.
5. A signed Apparel Merchandising and Design major on a B.S., B.A., or B.A.A. degree.

Program of Study
Students must be fully admitted to the accelerated program prior to beginning classes that are expected to be counted towards both degrees. During their first semester of enrollment, students may take one 600-level course and one 500-level course to be counted towards both degrees. During the second semester of enrollment, students may take one 600-level course and one 500-level course or two 600-level courses to be counted towards both degrees. Students may not take more than 6 hours per semester for dual credit.

Application Process:
Undergraduate students seeking admission to the Accelerated Masters Degree Program must submit the application for admission to the College of Graduate Studies no later than March 15 of the year prior to graduation from their undergraduate program. This application should be accompanied by the student’s transcripts and the applicant must also present a 2-4 page, typed, double-spaced essay that (Part I) describes how previous experiences and training have prepared and led the applicant to pursue a Master of Science degree in Apparel Product Development and Merchandising Technology (APDMT) and (Part II) identifies likely professional goals and how graduate training can help accomplish these goals. This essay replaces the written statement requested as part of the application to the College of Graduate Studies. Three (3) letters of recommendation are also required, including two letters from faculty members. The third letter may be from another faculty member or from a professional who can address the student’s capacity to succeed as a graduate student.

Retention Standards
Upon admittance into the Accelerated Masters Degree Program (AMD), 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 AMD, 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)
• AMD 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)
• AMD 798 Thesis or AMD 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 undergraduate course work)
Entrance Exam: N/A
Internat’l 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 general 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 College of Graduate Studies. This essay replaces the written statement requested as part of the application to the College of Graduate Studies. This essay replaces the written statement requested as part of the application to the College of 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 in 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(3-0)
- FNS 662 · Micronutrients 3(3-0)
- FNS 670 · Seminar: Nutrition 1-3(Spec)
- FNS 672 · Advanced Clinical Nutrition 3(3-0)
- FNS 673 · Advanced Nutritional Assessment 3(3-0)
- FNS 677 · Nutritional Epidemiology 3(3-0)
- FNS 678 · Research Methods in Nutrition 3(3-0)
- FNS 790 · 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 FNS 670 and 6 credit hours of FNS 790.

**Option II - Plan B: Internship Option (33 hours)**
- FNS 661 · Macronutrients 3(3-0)
- FNS 662 · Micronutrients 3(3-0)
- FNS 670 · Seminar: Nutrition 1-3(Spec)
- FNS 672 · Advanced Clinical Nutrition 3(3-0)
- FNS 673 · Advanced Nutritional Assessment 3(3-0)
- 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(3-0)
- FNS 678 · Research Methods in Nutrition 3(3-0)
- FNS 790 · Independent Study in Dietetics 2-6(Spec)

Plus oral examination over course work and 9 additional hours of electives 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 continuously 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 coursework 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(3-0)
- FNS 662 · Micronutrients 3(3-0)
- FNS 671 · Advanced Topics in Nutrition: Geriatrics 3(3-0)
- FNS 672 · Advanced Clinical Nutrition 3(3-0)
- FNS 673 · Advanced Nutritional Assessment 3(3-0)
- FNS 677 · Nutritional Epidemiology 3(3-0)
- FNS 678 · Research Methods in Nutrition 3(3-0)
- FNS 679 · Advanced Topics in Nutrition: Obesity 3(3-0)

**Required Course (1 hour)**
- FNS 670 · Seminar: Nutrition 1-3(Spec)

**Total:** 16 semester hours
Graduate Certificate in Gerontology

Minimum Totals for Graduation: 18 hours

Gerontology is the holistic study of aging. The 18-credit graduate certificate is designed to provide a basic foundation in theory, research, and practice specific to late life. The program includes two required courses. The remainder of the credits is elected from three groupings of courses: Psychological; Physical Health and Administrative; and Family, Culture and Society. The courses are offered by an array of departments throughout the campus, reflecting the interdisciplinary nature of gerontology.

The certificate is designed to complement students’ major course of study. It addresses career trajectories in which students enter professions serving clienteles that include significant numbers of older adults and need expertise in aging.

Students seeking the certificate must be accepted into the College of Graduate Studies at CMU. Although the program can be completed in three semesters, a student-paced approach to the certificate is equally suitable. The advisor for the certificate is located in the Department of Human Environmental Studies.

Core Courses (6 hours)
GRN 631 - Gerontology: Theory and Practice 3(3-0)
GRN 632 - Public Policy and Aging 3(3-0)

Required Courses I - Psychological Group (3 hours)
Select from the following:
HDF 535 - Dementia Care: Diagnosis, Treatment and Prevention 3(3-0)
PSY 724 - Psychology of Aging 3(3-0)

Required Courses II - Physical Health and Administration Group (3 hours)
Select from the following:
CDO 638 - Seminar: Adult and Pediatric Swallowing and Feeding Disorders 3(3-0)
FNS 575/GRN 575 - Geriatric Nutrition 3(3-0)
FNS 671 - Advanced Topics in Nutrition: Geriatrics 3(3-0)
HSC 506 - Health and Physical Development in Late Life 3(3-0)
HSC 517 - Drugs and the Elderly 2(2-0)
HSC 592 - Administration Issues in Long-Term Care 3(3-0)
HSC 593 - Resident Care Issues in Long-Term Care Administration 3(3-0)
HSC 620 - Adult Health Education Theory and Practice 3(3-0)

Required Courses III: Family, Culture and Society Group (3 hours)
Select from the following:
CED 685 - Counseling Aspects of Grief and Loss 3(3-0)
GRN 597 - Special Topics 1-4(Spec)
HDF 618 - The Family Life Cycle: The Older Adult 3(3-0)

Required Courses IV (3 hours)
Select hours from any one of the three groups above.
Total: 18 semester hours

Course Descriptions: AMD
AMD 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: AMD 241, AMD 345, AMD 355.
AMD 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 AMD 401.
AMD 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: AMD 246, 345, 355, 401; Pre/Co-requisite: AMD 550. For Apparel Merchandising Concentration: AMD 246, 355, 358, 401; Pre/Co-requisite: AMD 550. Or admission to College of Graduate Studies.
AMD 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: AMD 141, 256, minimum GPA of 2.5, and permission of instructor. Recommended: AMD 140.
AMD 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.
AMD 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.
AMD 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.
AMD 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.
AMD 641 Apparel Presentation Technology 3(2-2)
Software applications specific to apparel presentation in retail and virtual environments. Emphasis on creation of planograms for product display. Prerequisites: AMD 246, Admission to the Apparel Product Development and Merchandising Technology graduate program.
AMD 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.
AMD 656 Apparel Retail 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.

AMD 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.

AMD 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.

AMD 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.

AMD 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 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 parental 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)
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 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 675 Dietetic Internship: Foodservice Administration Experience 5(Spec)
Application of administrative principles to the operation of foodservice programs 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.
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)
An 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 HDF5 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 HDF5 graduate program.

HDF 686 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. Prerequisite: HDF 600, completion of at least 12 credits in the HDF5 graduate program.

HDF 688 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 686.

HDF 697 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 786 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. Prerequisites: 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 HDF5; Permission of Plan B Committee based on approval of Plan B proposal.

Course Descriptions: HEV

HEV 790 Independent Study 2-6(Spec)
Student-initiated study in an area not covered in regular courses guided by faculty or faculty committee. Prerequisites: Admission to College of Graduate Studies and permission of instructor.

HEV 798 Thesis 1-6(Spec)
Individual research or creative endeavor culminating in a written thesis and/or exhibition of work. CR/NC only.
**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)**
Emphasis on interaction of public relations with society, with individual case studies. Prerequisites: JRN 350.

**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

Mahmood S. Bahae, Chairperson
200 Smith Hall, (989) 774-3450

Mahmood S. Bahae, 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
Van Miller, Ph.D., International Business
Michael J. Pisanini, Ph.D., International Business
Luis A. Perez-Batres, Ph.D., Strategic Management, International Business
Syed Shahabuddin, Ph.D., Production/Operations Management, and Management Science
Herman A. Theeke, Ph.D., Human Resource Management

See the College of Business Administration for information on the Master of Business Administration (MBA).

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 signed 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 transcripts. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 600 Principles of Management Science/Management Information Systems 3(3-0)
Quantitative techniques in production and operations management and resource planning. Basic concepts of management information systems and decision support systems. Prerequisites: admission to MBA or permission of MBA director and STA 282.

MGT 643 Human Resource Management 3(3-0)
Theories, systems, practices, problems, and solutions of human resource management in organizations. Credit cannot be earned in both MGT 633 and 643. This course is approved for offering in a distance learning format. Prerequisites: Admission to graduate program or permission of the Department Chairperson.

MGT 645 Personnel Compensation Practice and Process 3(3-0)
Procedures and methods for developing and delivering employee compensation programs. Credit cannot be earned in both MGT 635 and MGT 645. This course is approved for offering in a distance learning format. Prerequisites: MGT 643, or 633; STA 282 or 382 or statistics competency; admission to graduate program.

MGT 646 Labor Relations Issues 3(3-0)
Exploration of the public sector, private sector, and international issues in labor relations. Credit cannot be earned in both MGT 636 and MGT 646. Prerequisite: MGT 320, admission to graduate program.

MGT 647 Employee Selection and Evaluation 3(3-0)
In-depth analysis of the functions of employee selection and performance appraisal in organizational settings, with emphasis on quantitative techniques. This course is approved for offering in a distance learning format. Credit cannot be earned in both MGT 647 and MGT 637. Prerequisites: STA 282 or 382 or statistics competency; MGT 320 or 633 or 643; admission to graduate program.

MGT 649 Seminar in Organizational Development 3(3-0)
The processes, tools and techniques of organization change. Organization Development (OD) is the study of planned change in order to improve firms’ effectiveness and efficiency. This course is approved for offering in a distance learning format. Prerequisites: admission to MBA or permission of MBA director.

MGT 657 International Management 2(2-0)
From a contemporary perspective, the course deals with managing subsidiaries and affiliates in different country- and cultural-context. Credit cannot be earned in both MGT 657 and MGT 667. Prerequisites: admission to the MBA Program or permission of the MBA director.

MGT 667 International Business 3(3-0)
This course deals with operating subsidiaries and affiliates in different country- and cultural-contexts. Credit cannot be earned in both MGT 667 and MGT 657. Prerequisites: admission to graduate program.

MGT 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.

MGT 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. Prerequisite: graduate status and permission of instructor.

MGT 798 Thesis 1-6(Spec)
Department of Marketing and Hospitality Services Administration (HSA, MKT)

College of Business Administration

Richard Divine, Chairperson
100 Smith Hall (989) 774-3701

Concha Allen, Ph.D., Marketing/Professional Sales
Kenneth Cherry, Marketing/Professional Sales
Robert L. Cook, Ph.D., Marketing/Logistics
Steven H. Dahlquist, Ph.D., Marketing/Professional Sales
Rebecca Dingus, Ph.D., Marketing/Entrepreneurship
Richard L. Divine, Ph.D., Marketing
Michael S. Garver, Ph.D., Marketing
Sean Goffnett, Ph.D., Marketing/Logistics
Deborah Gray, Ph.D., Marketing
Lawrence R. Lepisto, Ph.D., Marketing
Obinna Obilo, Ph.D., Marketing
Yae Sock Roh, Ph.D., Hospitality
Samuel Spralls III, Ph.D., Marketing
Crina Tarasi, Ph.D., Marketing
Zachary Williams, Ph.D., Marketing/Logistics

See the College of Business Administration for information on the Master of Business Administration (MBA).

Course Descriptions: MKT

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 transcript. 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. The 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 Descriptions: 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 M.B.A. 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.
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

James Angelos, Ph.D., Montana State University, approximation theory
Ahmed Assaf, Ph.D., Technion University, combinatorics
Leo T. Butler, Ph.D., Queen's University, geometry, topology, dynamical systems
C-Y. Jean Chan, Ph.D., University of Utah, commutative algebra and algebraic geometry
Chin-I Cheng, Ph.D., University of Missouri-Columbia, statistics
Susan Cooper, Ph.D., Queen's University, algebraic geometry and commutative algebra
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 Ericksen, 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
Dennis St. John, Ph.D., University of Iowa, mathematics education
Jungsywan Sepanski, Ph.D., Texas A&M University, statistics
Mohan S. Shrikhande, Ph.D., Indiana University, combinatorics
Daniel X. Wang, Ph.D., The University of Alabama, applied statistics
Mingan 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 in Mathematics (M.A.) that also offers an Accelerated Program 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.

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 Requirement Snapshot
GPA: 2.7 (and 2.7 in major)
Entrance Exam: GRE Recommended
International Application Deadline: July 1 (Fall), Oct. 1 (Spring)
See Admission Requirement Details Below
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 the College of 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)

**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)

**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)

**Year 5 - Fall (7-9 hours)**
- A statistics (STA) elective (3 hours), MTH 636 (3 hours), plus:
  - 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 - Summer (3 hours)**
- Computational/Mathematics Requirement or Perspectives in Mathematics Requirement (3 hours)
  
**Year 5 - Summer (3 hours)**
- Computational/Mathematics Requirement or Perspectives in Mathematics Requirement (3 hours)
  
**BA or BS 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

1. Applicants must meet all College of Graduate Studies admission requirements. International students should take note of any special admission considerations required by the College of 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 I 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.
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 College of 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 College of 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

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.

Course Descriptions: MTH
MTH 520 Optimization Theory 3(3-0)
An introduction to the theory, practical applications and algorithms of nonlinear 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 cryptology. Prerequisite: MTH 332.

MTH 522 Math of Cryptology 3(3-0)
The mathematics and algorithms of classical and computer-age cryptology. 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, triangulizable and diagonalizable transformations; inner product spaces. Prerequisite: MTH 523.

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 133.

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 decrements models, pension mathematics, interest rate models, and cash flow analysis for insurance products. Prerequisites: MTH 541.

MTH 545  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 351 and MTH 554.

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 351 and MTH 554.

MTH 554  Probability and Statistics for K-8 Mathematics Teachers 3(3-0)  
Examines experimental and theoretical probability and statistics suitable for elementary and middle school. Simulations, counting techniques, and data gathering, organization, analysis and presentations. Credit will not apply toward Master’s degree in mathematics. Prerequisites: MTH 256.

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 1(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 co-requisite.

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 341, 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-requirements: 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  Continuing Registration for Final Research Project 1(1-0)  
Non-credit course intended for students who have completed all program credits 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.

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 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)
Complex numbers, analytic functions, elementary functions, Cauchy’s theorem, Integral formula, Taylor and Laurent series, residue theorem and its applications, Rouche’s theorem. Prerequisite: MTH 532.

MTH 637 Complex Variable Theory 3(3-0)
Conformal mapping, Mobius transformations, harmonic functions, Dirichlet problem, entire and meromorphic functions, analytic continuation, Riemann 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. Co-requisite: MTH 533.

MTH 641 Topics in Geometry 3(3-0)
Advanced topics in geometry, foundations, non-Euclidean geometry. Prerequisite: MTH 541.

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 in 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 678 Combinatorics II 3(3-0)
Finite geometries, combinatorial designs, strongly regular graphs, and error correcting codes. Prerequisite: MTH 578. Co-requisite: MTH 525.

MTH 692 Graduate Seminar in Mathematics Education 1-4(Spec)
Seminars will focus on current issues in mathematics education. May be taken for credit more than once, total credit not to exceed 4 hours. 3 credits needed before it counts as elective on any graduate degree in mathematics. Prerequisites: admission to graduate program in mathematics.

MTH 693 Graduate Seminar in Mathematics and Its Applications 1-4(Spec)
One hour seminars in subfields of mathematics and its applications; 3 credits needed before it counts as elective on graduate degree 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 course. May be taken for credit more than once, total credit not to exceed 6 hours. Prerequisite: permission of instructor.

MTH 697 Independent Study 1-9(Spec)
Open to graduate students in mathematics with permission of instructor. May be taken for credit more than once, total credit not to exceed 9 hours.

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)
Fundamentals of topological vector spaces, normed spaces, Banach and Hilbert spaces, functional on such spaces, operators on Banach and Hilbert spaces, spectral theorems, Banach algebras. Prerequisites: MTH 632 and MTH 636.

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 level 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 undergraduate mathematics or statistics courses 200 level or above. 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 who have completed 30 hours of coursework required toward the Doctoral program, with permission of the instructor. May be taken for credit more than once, total credit not to exceed 9 hours.

MTH 798 Thesis 1-6(Spec)
Work towards Master's thesis. Prerequisites: Graduate status and permission of thesis advisor. CR/NC only.

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 is approved for offering in a distance learning format. Prerequisites: STA 282 or STA 382; or graduate standing.

STA 580 Applied Statistical Methods I 3(3-0)
Applications of statistical methods including the usage of computer packages. Topics include forecasting, simple and multiple regression, and analysis of variance. This course is approved for offering in a distance learning format. Prerequisites: STA 282 or STA 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. Prerequisite: STA 382.

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. Prerequisites: STA 382.

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 382.

STA 589 Time Series Forecasting 3(3-0)
Introduction to basis time series forecasting techniques. Topics include forecasting, Box-Jenkins models, time series regression, exponential smoothing, and transfer function models. Prerequisites: 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)
Supervised data mining techniques for analyzing large and high dimensional data. Topics include data mining strategy, data processing, predictive modeling techniques, model assessment and comparison. This course has been approved for offering in a distance learning 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 improvements. Topics include DMAIC and PDSA strategies and applications, tools and statistical techniques used in the strategies. Prerequisites: STA 282 or STA 382; 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 680 Statistical Data Analysis and Consulting 3(3-0)
Advanced data analysis techniques, including categorical data analysis methods, logistic and loglinear models using statistical software such as SAS, SPSS, and MINITAB. Principles and techniques of statistical consulting. Prerequisite: STA 590.

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: including cluster and sequence analysis, self organizing maps, support vector machine, path mining, and Bayesian network. Recommended: STA 580 or equivalent.

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)

Ernest L. Yoder, M.D., Ph.D., MACP, Founding 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, Assistant 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
Rolein 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 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.

Dr. W.E. and Idonea Hersee Memorial Medical Scholarship
Established in 2013 by Sandra and Dennis Olson in honor of Sandra’s parents, Dr. W.E. Hersee ’31 and Idonea Lewis Hersee ’31. Scholarship will support a renewable award for a full-time first year student enrolled in the College of Medicine who has a minimum GPA of 3.4.
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 is a Michigan resident, has proven his/her commitment to community involvement from an early age, and has participated in some business and/or communication classes as an undergraduate student. 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.

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. Recipient should be a resident of Lower Michigan who was born and raised in a community located between M-46 and the Mackinaw Bridge. Financial need is 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 mid- or northern Michigan, especially the Flint and Saginaw areas. Applicant will also write an essay expressing his/her desire to attend CMU’s medical school.

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 3.5. Recipient should have a stated purpose, explained in a required essay, in Family Practice and also have an 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.

Admission Requirements, Retention & Termination Standards
Students should access the most current information directly from the CMU College of Medicine website (www.cmich.edu/med).

Required Courses - Year I (81 hours)
MED 600 - Society & Community Medicine 9(Spec)
MED 610 - Essentials of Clinical Skills 17(Spec)
MED 620 - The Art of Medicine 9(Spec)
MED 630 - Foundational Sciences of Medicine: Wellness and Disease 18(Spec)
MED 640 - Reproductive/Human Development: Wellness and Disease 8(Spec)
MED 650 - Cardiopulmonary: Wellness and Disease 10(Spec)
MED 660 - Renal/Endocrine: Wellness and Disease 10(Spec)

Required Courses - Year II (38 hours)
MED 740 - Neurosciences and Behavior: Wellness and Disease 10(Spec)
MED 750 - Musculoskeletal/Dermal: Wellness and Disease 8(Spec)
MED 760 - Gastrointestinal: Wellness and Disease 8(Spec)
MED 770 - Hematology/Oncology: Wellness and Disease 8(Spec)
MED 780 - SYNAPSE 4(Spec)

Required Courses - Years III and IV (124 hours)
To be taken in Year III only:
MED 797 - Special Topics: Medical Clerkship Elective 1-30(Spec)
MED 800 - Comprehensive Community Clerkship 36(Spec)

May be taken in either Year III or IV:
MED 810 - Clerkship: Surgery 6(Spec)
MED 820 - Clerkship: Hospitalist - Internal Medicine 6(Spec)
MED 830 - Clerkship: Psychiatry 6(Spec)
MED 840 - Clerkship: Obstetrics and Gynecology 6(Spec)

To be taken in Year IV only:
MED 910 - Surgery Sub-Internship 8(Spec)
MED 920 - Internal Medicine Sub-Internship 8(Spec)
MED 930 - Clerkship: Emergency Medicine 6(Spec)
MED 997 - Special Topics: Medical Clerkship Elective 1-42(Spec)
MED 999 - Capstone 6(Spec)

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.
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 8(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.

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.
School of Music (MUS)
College of Communication and Fine Arts

Randi L'Hommedieu, Director
162 Music, (989) 774-3281

James Batcheller, D.A., Band
Jay C. Batzner, DMA, Electro-Acoustic Music
Bruce Bonnell, D.M., Horn
Jennifer Campbell, Ph.D., Music Theory
Keith Clifton, Ph.D., Musicology
Mark Cox, D.M.A., Tuba and Euphonium
Steven L. Egler, D.M.A., Organ
Edward Fedewa, M.M., Double bass
James Fiste, D.M.A., Violoncello
Sue G. Gamble, D.Ed., Music Education
David Gillingham, Ph.D., Theory/Composition
Alan Gumm, Ph.D., Music education
Scott Harding, Ph.D., Theory
Randi L'Hommedieu, Ph.D., Music Education
Robert Lindahl, D.M.A., Trombone
Alexandra Mascolo-David, D.M.A., Piano
José Maúrtua, D.M., Theory
Mary Beth Minnis, M.M., Bassoon, Assistant Director
Nina Nash-Robertson, D.M.A., Director of Choral Activities
John Nichol, M.M., Saxophone
Rob Smith, M.M., Jazz Studies
Andrew Spencer, D.M.A., Percussion
Daniel L. Steele, D.M.E., Music Education, Graduate Coordinator
Eric Hoy Tucker, D.M.A., Voice
Joanna Cowan White, D.M.A., Flute
Kenneth White, D.M.A., Clarinet
Adrienne Wiley, D.M.A., Piano Pedagogy
John Williamson, M.M.E., Director of Bands

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 - 36 hours

<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>Internet 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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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. Applicants must have an appropriate music degree of at least 40 semester hours and a grade point average of 3.0 or better in undergraduate music studies.
2. Applicants must submit three letters of recommendation and a writing example (e.g., term paper from undergraduate studies) to the School of Music.
3. Additional admission requirements for each concentration are as follows:
   - Composition applicants must submit a portfolio of their compositions accompanied by a CD recording.
   - Conducting applicants must submit a VCR or DVD of their conducting.
   - Music Education applicants must have a music education degree or a major with at least 40 hours in music.
   - Performance applicants must audition with the appropriate faculty member or performance area.
   - Piano Pedagogy applicants must audition with the appropriate keyboard faculty member and submit a video of their teaching.
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 a school graduate advisor.
2. Candidates for the Master of Music degree must pass a comprehensive examination. Comprehensive exams may be taken a maximum of three times.
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 certification requirements before graduation.

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
Music: Music Education

Required Courses (6 hours)
MUS 731 - Curriculum Design in Music Education 3(3-0)
MUS 732 - History and Philosophy of Music Education 3(3-0)

Electives (12 hours)
12 hours selected in consultation with an advisor:
- 6 hours of Pedagogy Electives
- 6 hours of Music Electives (Participation in conducted or coached ensembles is recommended.)

Total: 30 semester hours

Music: Performance

Required Courses (13 hours)
An Applied Major Area (8 hours) plus:
MUS 780 - Performance Ensembles 1-8(Spec)
MUS 799 - Recital 4(Spec)
Note: 1 hour of MUS 780.

Electives (5 hours)
Music electives selected in consultation with an advisor.

Total: 30 semester hours

Course Descriptions: MUS

MUS 503 Advanced Counterpoint 2(2-0)
Advanced counterpointal techniques and writing assignments in 18th century style. Prerequisites: MUS 302; Music candidacy; or admission to the graduate music program.

MUS 504 Contemporary Compositional Techniques 2(2-0)
Compositional techniques from 1945 to the present, with particular attention paid to electronic music. Prerequisite: MUS 202, MUS 309, and admission to Music candidacy; or graduate standing in 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-Schulwerk approach to music education. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

MUS 532 Dalcroze Eurhythmics 2(1-2)
Introduction to the music education philosophy and approach of Emile Jacques-Dalcroze. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

MUS 533 Kodály Pedagogy 2(1-2)
Philosophy, materials, and pedagogy of the Kodály method of music education. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

MUS 534 Music for Pre-School Children 2(2-0)
Musical activities for the preschool child designed to nurture musical potential and promote musical awareness. Prerequisite: Junior status or above; or graduate status.

MUS 535 Workshop in Music Education 1-4(Spec)
Practical applications of selected music education trends, techniques, or methodologies. Repeatable up to four hours when content previously studied is not duplicated. Prerequisites: Music Candidacy or admission to the graduate music program.

MUS 540 Organ Pedagogy Practicum 2(Spec)
Supervised experience in teaching the organ. Prerequisites: Admission to Music Candidacy, MUS 351; or admission to the graduate music program.

MUS 552 Jazz Piano 1-8(Spec)
Individual instruction in jazz piano performance. May be taken more than once, for 1-2 credits per enrollment, not to exceed eight credits. Prerequisites: Music Candidacy or admission to the graduate music program.

MUS 553 Kodály Pedagogy 2(1-2)
Practical applications of contemporary 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 554 Music Education Practicum 2(Spec)
Practical experience in teaching the music program. Prerequisites: Admission to Music Candidacy, MUS 531; or admission to the graduate music program.

MUS 555 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 556 Advanced Jazz Improvisation Pedagogy and Practicum 2(1-2)
Advanced improvisation and ensemble leadership skills in a laboratory setting. Prerequisites: Music Candidacy or admission to the graduate music program.

MUS 557 Jazz Improvisation Laboratory 2(1-2)
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 561 Continuing Registration for Final Research Project 1(1-0)
Anon-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 570 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 580 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 601 Jazz Improvisation and Analysis 3(3-0)
Advanced study of jazz harmony and analysis. Prerequisites: Admission to the graduate music program.

MUS 607 Jazz Improvisation Pedagogy and Practicum 2(Spec)
Practical experience in teaching the jazz improvisation program. Prerequisites: Music Candidacy or admission to the graduate music program.

MUS 619 Continuing Registration for Final Research Project 1(1-0)
Anon-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 Advanced 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 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 622 Modern 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 and methods for developing appropriate curricula for K-12 music programs. Prerequisite: admission to the graduate music program.

MUS 732  History and Philosophy of Music Education 3(3-0)
Examination of 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: MUS 335.

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. The 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 percus-
sion 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 en-
semble setting. Open by audition to any graduate student in the
university. CR/NC only.

MUS 781 Advanced Choral Conducting 3-6(Spec)
Advanced rehearsal and conducting techniques for the choral
director. 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 comple-
tion of music audition.

MUS 784 Instrumental Rehearsal Techniques 3(3-0)
Pedagogical techniques for the musical preparation of instru-
mental ensembles. Prerequisite: 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. Pre-
requisite: 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.

MUS 798 Thesis 1-6(Spec)
A capstone research study completed in consultation with a
thesis advisor. CR/NC only. Prerequisite: Admission to the gradu-
ate music program.

MUS 799 Recital 4(Spec)
Preparation and performance of a juried public recital. Pre-
requisites: 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:

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Hours Credit</th>
<th>Applicable Toward Graduation</th>
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<tbody>
<tr>
<td>In Each Area</td>
<td>Maximum Hours</td>
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</tr>
<tr>
<td>Master of Music</td>
<td>1-8</td>
<td>8</td>
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<tr>
<td>Master of Arts</td>
<td>1-2</td>
<td>4</td>
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</tbody>
</table>

(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 Anschap (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
Merlyn 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

Scott J. Smith, Chairperson
Health Professions Building 2234; (989) 774-2859
E-mail: Scott.J.Smith@cmich.edu

H. Ray Allen, Ph.D., Pedagogy
Gary W. Arbogast, Ph.D., Pedagogy and Curriculum
Judy P. Chandler, Ph.D., Special Physical Education
Janet S. Helfrich, Ed.D., Motor Learning, Sport Psychology, Elementary Physical Education, Coaching
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.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Minimum Totals for Graduation: 36 hours

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 the CMU College of Graduate Studies.

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
PES 602 - Sport Event Management: Theory & Application 3(Spec)

PES 603 - Administration of Sport 3(3-0)
PES 625 - Facilities for Sport and Physical Education 3(3-0)
PES 640 - Sport and the Law 3(3-0)
PES 645 - Financial Management of Sport 3(3-0)
PES 650 - Sport Marketing 3(3-0)
PES 603 Administration of Sport 3(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 606 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(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(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(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(1-0)
Anon-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(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(3-0)
Study of biological and mechanical aspects of biomechanics including the techniques of visual and cinematographic analysis.
PES 670 Research Methods for Physical Education and Sport, Health and Recreation 3(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(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 670 Independent Study 3(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 673 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. Prerequisite: PES 670.

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 G.P.A. or higher; significant progress toward Plan B 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.

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**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 Finck, Ph.D., Experimental Nuclear Physics, Science Policy**

**Marco Fornari, Ph.D., Computational Condensed Matter Physics**

**Stanley Hirschi, Ph.D., Theoretical Physics, Experimental Polymer 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**

**Kathrin Wimmer, Ph.D., Experimental Nuclear Physics**

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/](http://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 twelve semester hours in advanced mechanics, electricity and magnetism, and quantum mechanics. Three hours of seminar are required, and six hours of credit are given for the thesis. In consultation with an advisor, the student selects at least nine additional hours in areas of specific value to the student. The program is normally completed in two years. There is no qualifying examination, and no foreign language is required.

Admission Requirements, Retention & Termination Standards

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 (21 hours)
PHY 624 - Advanced Mechanics 3(3-0)
PHY 634 - Advanced Electricity and Magnetism 3(3-0)
PHY 643 - Quantum Mechanics I 3(3-0)
PHY 644 - Quantum Mechanics II 3(3-0)
PHY 685 - Seminar: Contemporary Physics 1-4(Spec)
PHY 798 - Thesis 1-6(Spec)

Note: 3 hours of Seminar and 6 hours of Thesis are required for graduation.

Cognate Courses (0-6 hours)
Cognate courses may be chosen to meet the individual needs of the student, but must be in a discipline closely related to the area of specialization.

Electives (3-9 hours)
AST 562 - Observational Astronomy 4(3-2)
AST 563 - Astrophysics 3(3-0)

Or any physics courses at the 500 level or above.

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. Prerequisites: 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)
Anon-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.

Course Descriptions: PHS

PHS 522 Workshop for Physical Science 3(2-2)
Development of units for use in the teaching of physical science, including the preparation of simple equipment for science demonstrations. Course designed primarily for teachers K-9. Prerequisite: PHS 251.

PHS 551 History and Literature of Physical Science 3(3-0)
Physical science in western civilization, emphasizing the scientific revolution and reaching back to the middle ages and the ancient world. Prerequisite: PHS 251.

PHS 563 Physical Science Practicum 2(Spec)
Practical experience in all aspects of teaching a physics class with a laboratory component. Prerequisite: permission of instructor.

PHS 565 Selected Topics in Physical Science 1-6(Spec)
Topics not ordinarily covered in regular courses.

PHS 590 Independent Study 1-6(Spec)
Individual study in an area not covered by regular courses. Prerequisite: Prior permission of the instructor must be obtained.

Course Descriptions: AST

AST 511 Astronomy for Teachers 3(2-2)
Teaching astronomy in the elementary, middle, and secondary schools. Appropriate subject matter, student activities, demonstrations, experiments, sources of astronomical materials, planetarium utilization. Prerequisite: AST 111.

AST 562 Observational Astronomy 4(3-2)
Celestial mechanics, astronomical instruments, and the techniques of astronomical direct imaging, photometry, and spectroscopy. Prerequisite: PHY 322; AST 260 or AST 261.

AST 563 Astrophysics 3(3-0)
Stellar atmospheres, stellar interiors, interstellar matter and topics of current interest. Prerequisites: AST 261; PHY 332.

AST 580 Special Topics in Astronomy 1-9(Spec)
Topics in astronomy or astrophysics not ordinarily covered in regular courses. Prerequisites: As specified in course syllabus.

AST 590 Independent Study 1-6(Spec)
Individual study in an area not covered in regular courses. Prior permission of the instructor must be obtained. Prerequisites: AST 260 and permission of instructor.

Department of Political Science and Public Administration (PSC)

Lawrence Sych, Chairperson
247 Anspach Hall, (989) 774-3442
Prakash Adhikari, Ph.D., Comparative Politics
Joyce A. Baugh, Ph.D., Constitutional Law
Edward Clayton, MA Director, Ph.D., Normative Political Theory
C.W. (Bill) Cowles, Ph.D., Public Policy and Administration
Moataz A. Fattah, Ph.D., Comparative Politics, Middle East
Nathan Grasse, Ph.D., Public Administration
Thomas Greitens, MPA Director, Ph.D., Public Administration
James P. Hill, Ph.D., Public Policy
David K. Jesuit, Ph.D., Comparative Politics, Western Europe
Sterling Johnson, Ph.D., American Foreign Policy
Sharon Kuuk-Acevedo, Internship Director, Ph.D., Public Administration
Won K. Paik, Ph.D., International Relations
Nancy Quarles, Ph.D., Public Administration
Delbert Ringquist, Ph.D., Public Policy, Leadership and The Presidency
J. Cherie Strachan, Ph.D., Political Participation, Interest Groups, Political Behavior
Lawrence Sych, Ph.D., State and Local Government and Public Administration

The Department of Political Science and Public Administration offers a Master of Arts degree in Political Science, a Master of Public Administration degree, and courses contributing to several other graduate programs at the university, including a concentration in Public Administration in the Master of Science in Administration. The department also offers courses which fulfill the requirements for the Political Science Concentration in Option 1, Teaching in the Senior High School in the Master of Arts in Secondary Education Unit in This Bulletin. The department's graduate level internship program provides working knowledge of and experience in public and non-profit agencies.

The specific requirements for the Master of Arts in Political Science and the Master of Public Administration are stated in separate sections below.

Master of Arts (M.A.) in Political Science

Minimum Totals for Graduation: 33 hours
Program Director: Edward W. Clayton, Ph.D., 989-774-3442; edward.clayton@cmich.edu
Mission Statement
The Master of Arts (MA) program in Political Science at Central Michigan University is designed for students who are planning to pursue further graduate education and for students who, for reasons of career enhancement or of specialized training for employment, are seeking a Master's degree as their ultimate goal. The Department provides students with rigorous academic training in the discipline and offers students the option to specialize either in the study of American Politics or Comparative Politics and International Relations. This preparation enables CMU graduates to be competitive when applying to Ph. D. programs,
law schools or other graduate programs. In addition, CMU MA graduates will be well-prepared for a wide range of other careers, including federal, state and local government, the Foreign Service, teaching at the community college or high school level, and careers in the private sector.

Accordingly, the Master of Arts (MA) program in Political Science at Central Michigan University has the following goals:
• educating students about the diversity of models, approaches, and intellectual traditions within Political Science;
• training students in the appropriate research skills necessary to complete their research objectives;
• 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**

| GPA: 2.8 | Entrance Exam: N/A |
| Internatl Application Deadline: July 1 (Fall), Oct. 1 (Spring) | See Admission Requirement Details Below |

**Admission**

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 application to the College of Graduate Studies.
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 dean of the College of Graduate Studies.

**Program Requirements**

A 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 (18 hours); either the American Politics Concentration (9 hours) or the Comparative/International Politics Concentration (9 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 (18 hours)**

- PSC 520 - American National Government and Politics 3(3-0)
- PSC 551 - Seminar in International Relations 3(3-0)
- PSC 680 - Methodology of Political Research 3(3-0)
- PSC 740 - Seminar in Comparative Politics 3(3-0)
- PSC 770 - Seminar in Political Theory 3(3-0)
- PSC 781 - Techniques of Political Research 3(3-0)

**Concentrations (9 hours)**

Select one of the following concentrations:

**American Politics Concentration**

Select 3 courses from the following:
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 516 - Environmental Politics and Policy 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
- PSC 561 - American State Government and Administration 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 761 - Seminar in American State Government 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)

**Comparative/International Politics Concentration**

Select 3 courses from:
- PSC 515 - Comparative Public Policy 3(3-0)
- PSC 555 - International Law I 3(3-0)
- PSC 556 - International Law II 3(3-0)
- PSC 583 - Survey Research 3(3-0)
- PSC 642 - Problems and Processes of International Development I 3(3-0)
- PSC 651 - Comparative Political & Economic Systems 3(3-0)
- PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)

**Plan Option (6 hours)**

Select either Plan A or Plan B:

**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). At this time the student shall form a Master’s Thesis Committee, including a Chair and two additional members, and complete a 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 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.

Accordingly, 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, normally after revisions, are satisfactory for permanent filing. In addition, students will be required to complete an oral defense of each of these papers before the Committee. A minimum of 15-20 pages for each paper is suggested.

**Total: 33 semester hours**

**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 the College of Graduate Studies 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 the College of 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 course work.

**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.

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**Master of Public Administration (M.P.A.)**

**Minimum Totals for Graduation:** 36 hours

**Program Director:** Dr. Thomas Greitens, 989-774-3862; greit1@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.

**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:
- by selecting a specific concentration in either Public Management or State and Local Government;
- by selecting a set of general elective courses; or
- 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.
Degree Emphasis (9-12 hours) through the tutelage of the entire teaching staff. Campus students are encouraged to develop their research topics to the committee when completed. Both on-campus and Global research topic. The student will present his or her finished paper three members, and, with their advice, develops an approved final semester, he or she forms a Plan B paper committee of courses by 1 course, or 3 credit hours.

Students without experience will take an internship (PSC 795). Students without experience will take 3 hours of internship, reducing their number of elective courses by 1 course, or 3 credit hours.

PSC 796 - Applied Research in Public Administration 3(3-0)

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.

General Electives (9-12 hours)

PSC 516 - Environmental Politics and Policy 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
PSC 561 - American State Government and Administration 3(3-0)
PSC 565 - Managing Modern Local Government 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 712 - Implementation and Reform of Public Programs 3(3-0)
PSC 761 - Seminar in American State Government 3(3-0)
PSC 773 - Administration and Ethics in Public Service 3(3-0)
PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
PSC 785 - Strategic Leadership 3(3-0)

Note: Both PSC 561 and PSC 761 may not be selected.

Public Management Concentration (9-12 hours)

PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
PSC 566 - Intergovernmental Relations in the United States 3(3-0)
PSC 585 - Public Sector Information Technology Management 3(3-0)
PSC 712 - Implementation and Reform of Public Programs 3(3-0)
PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
PSC 785 - Strategic Leadership 3(3-0)

State and Local Government Concentration (9-12 hours)

PSC 561 - American State Government and Administration 3(3-0)
PSC 563 - Politics and Policy in Urban Communities 3(3-0)
PSC 565 - Managing Modern Local Government 3(3-0)
PSC 566 - Intergovernmental Relations in the United States 3(3-0)
PSC 585 - Public Sector Information Technology Management 3(3-0)
PSC 761 - Seminar in American State Government 3(3-0)

Note: Both PSC 561 and PSC 761 may not be selected.

Total: 36 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 College of 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)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSC 585</td>
<td>Public Sector Information Technology Management</td>
<td>3(0)</td>
</tr>
<tr>
<td>PSC 611</td>
<td>Public Personnel Administration Practice</td>
<td>3(0)</td>
</tr>
<tr>
<td>PSC 613</td>
<td>Public Budgeting and Finance</td>
<td>3(0)</td>
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<tr>
<td>PSC 614</td>
<td>Program Analysis and Evaluation</td>
<td>3(0)</td>
</tr>
<tr>
<td>PSC 775</td>
<td>Organization Theory in Public Administration</td>
<td>3(0)</td>
</tr>
</tbody>
</table>

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(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(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(0)

Techniques of cross-national and other comparative policy analysis applied to social and economic policies of industrialized nations, especially Western Europe.

PSC 516 Environmental Politics and Policy 3(0)

Analysis of relationships between politics and public policy in the environmental arena. Emphasis upon policy making process, political strategies, and alternative decision modes. Prerequisites: complete minimum of 56 credit hours of university course work.

PSC 520 American National Government and Politics 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(0)

Survey of the principles of administrative law and the politics of the U.S. regulatory processes. This course is approved for offering in a distance learning format.
PSC 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 642 Problems and Processes of International Development I 3(3-0)
Impact of modernization and industrialization upon emergent 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 interactions of nations. Prerequisite: PSC 351.

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 711 Public Personnel Administration Practice 3(3-0)
Emphasizes skill development in selected areas of public personnel administration, 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)
Methodology of implementing public programs. Examination of administrative reforms and their implementation. Recommended: Admission to MPA program.

PSC 713 Public Budgeting and Finance 3(3-0)
Advanced study of public budgets and processes. Emphasizes 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. Recommended: Admission to MPA program.

PSC 740 Seminar in Comparative Politics 3(3-0)
Examination of the specific approaches and methods of comparative political analysis.

PSC 761 Seminar in American State Government 3(3-0)
Study and research in the problems and the process of state government. Content varies. Recommended: PSC 561.

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, freedom, 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 non-profit organizations. Develop and critique strategic plans, goals, and information processes. Recommended: PSC 713 or PSC 714.

PSC 775 Organization Theory in Public Administration 3(3-0)
A systems approach to studying the appropriate design structures for administering complex organizations in the public sector. Emphasis on diverse strategies in decision making, planning, and coordination.

PSC 780 Research in Public Administration in Political Science 3(3-0)
Conceptual frameworks within which policy is studied, and relationship between theory and empirical research.

PSC 781 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. Prerequisite: PSC 680.

PSC 785 Strategic Leadership 3(3-0)
Study of leadership within public and not-for-profit organizations. Examines leadership theories, analyzes case studies involving leaders, and explores leading organizational change. This course may be offered in an online or hybrid format.

PSC 790 Advanced Readings I 1-6(Spec)
Prerequisites: Permission of advisor and department chairperson.

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 knowledge 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.
The Department of Psychology
(PSY)

College of Humanities and Social & Behavioral Sciences

Katrina Rhymer, Chairperson
101 Sloan Hall (989) 774-3001

Ignacio “David” Acevedo-Polakovich, Ph.D., University of Kentucky. Multicultural psychology, applied youth development, program evaluation, participatory research

Jane Ashby, Ph.D., University of Massachusetts. Cognitive psychology

Richard Backs, Ph.D., University of Southern California. Human factors, psychophysiology, aging, attention, emotion.

Terry Beehr, Director, Industrial/Organizational Psychology, Ph.D., University of Michigan. Job stress, retirement, leadership, careers

Sharon Bradley-Johnson, Ed.D., Western Michigan University. Low incidence disabilities, educational diagnosis, infant assessment

Neil Christiansen, 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

Gary Dunbar, Co-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

Kyunghue Han, Director, Experimental Psychology, Ph.D., University of Minnesota. Scientific study of culture, quantitative methods, psychological test/scale 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, Ph.D., Western Michigan University. Behavior analysis, direct instruction, precision teaching, behavior development, curriculum based measurement

Melvyn Jaffa, Ph.D., Columbia 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.

Carl Johnson, Ph.D., Michigan State University. Sleep disorders, applied behavior analysis, organizational behavior management

Yannick Marchalant, Ph.D., université 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 psychopathology, psychological and medical problem interactions

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 Otani, 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 Prewett, 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, operant/respondent conditioning, animal learning, quantitative models, behavioral pharmacology, substance abuse

Katrina Rhymer, Director, School Psychology, 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 apparatus. 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 ten operant conditioning stations.

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 event-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 improve driver safety, and to conduct research on driver safety. The center has the AAA Michigan Driving Simulator for use in research and in evaluation and education. The D.E.E.R. Center is a place where multidisciplinary research on novice drivers, older drivers, and drivers with attention disorders is conducted. For more information, see http://deercenter.org.

Graduate Student Offices. Graduate teaching assistants have office space available to them in Powers and Sloan Halls.

Master of Science (M.S.) in Experimental Psychology

Minimum Totals for Graduation: 36 hours

The Master of Science in Experimental Psychology program at Central Michigan University is a broad yet flexible program designed to develop individual scholarship. Students are exposed to a variety of content areas, while concentrating on a major area of study. Throughout their program, all students are expected to be actively involved in research with a faculty member. The program’s primary emphasis is to prepare students for doctoral study or research positions in the public or private sector.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

<table>
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<th>GPA</th>
<th>Entrance Exam: GRE</th>
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Application Deadline: February 1 (Fall)

See Admission Requirement Details Below

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, and a 3.0 grade point average, 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 minimum 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)

Note: 2 hours of PSY 690; 6 hours of PSY 798.

In addition to course work, a student must complete an oral examination over the thesis.

(Continued)
Additional Requirement I (3 hours)
Select one course from the following:
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)

Additional Requirement II (3 hours)
Select one course from the following:
PSY 587 - Physiological Psychology 3(3-0)
PSY 687 - Physiological Foundations 3(3-0)

Additional Requirement III (3 hours)
Select one course from the following:
PSY 589 - Cognitive Psychology 3(3-0)
PSY 680 - Learning 3(3-0)
PSY 681 - Sensation and Perception 3(3-0)

Additional Requirement IV (3 hours)
Select one course from the following:
PSY 624 - Advanced Developmental Psychology 3(3-0)
PSY 630 - Advanced Social Psychology 3(3-0)

Cognate Courses (0-6 hours)
To be chosen in consultation with an advisor.
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 Note 1)
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 - 4 hours
Total: 6 hours

Summer
PSY 798 - 3 hours
Graduate Elective - 3 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.

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.
Committee on Accreditation
program in Applied Experimental Psychology are identical to
fourth years)

Total: 54 semester hours (minimum hours for third and
electives (18 hours)

required courses II (6 hours)

required courses (30 hours)

required courses II (6 hours)

electives (18 hours)

Degree Requirements

Admission Requirements, Retention & Termination Standards
Admission Requirement Snapshot
GPA: 3.0 Entrance Exam: GRE
Application Deadline: February 1 (Fall)
See Admission Requirement Details Below

Applicants to the Program are expected to have a baccalaureate degree, a minimum 3.00 GPA, 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.

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: 108 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

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 108 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
Doctor of Philosophy (Ph.D.) in Clinical Psychology

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.

(Continued)
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.

Degree Requirements

Year 1 (24 hours)
PSY 510 - Principles of Psychological Measurement 3(3-0)
PSY 609 - History and Systems of Psychology 3(3-0)
PSY 642 - Clinical Research Methods 3(3-0)
PSY 653 - Intervention I: Adult 3(3-0)
PSY 657 - Assessment I: Adult 3(3-1)
PSY 658 - Assessment II: Child and Adolescent 3(3-1)
PSY 660 - Intervention II: Child and Adolescent 3(3-0)
PSY 751 - Psychopathology 3(3-0)

Year 2 (30 hours)
PSY 612 - Applied Multiple Regression and Correlation 3(3-0)
PSY 613 - Multivariate and Correlational Methods 3(3-0)
PSY 624 - Advanced Developmental Psychology 3(3-0)
PSY 641 - Objective Personality Assessment 3(2-2)
PSY 765 - Seminar: Ethics and Professional Issues 3(3-0)
PSY 785 - Seminar: Cognitive-Behavior Therapy 3(3-0)
PSY 790 - Practicum I A: Professional Services 3(Spec)
PSY 791 - Practicum I B: Professional Services 3(Spec)
PSY 798 - Thesis 1-12(Spec)

Year 3 (24 hours)
PSY 751 - Psychopathology 3(3-0)
PSY 660 - Intervention II: Child and Adolescent 3(3-0)
PSY 668 - Assessment II: Child and Adolescent 3(3-1)
PSY 669 - Assessment I: Adult 3(3-1)
PSY 675 - Seminar: Ethics and Professional Issues 3(3-0)
PSY 790 - Practicum I A: Professional Services 3(Spec)
PSY 791 - Practicum I B: Professional Services 3(Spec)
PSY 798 - Thesis 1-12(Spec)

Year 4 (24 hours)
PSY 892 - Practicum III A: Professional Services 3(Spec)
PSY 893 - Practicum III B: Professional Services 3(Spec)
PSY 898 - Doctoral Dissertation: Design 1-12(Spec)
PSY 899 - Doctoral Dissertation: Implementation 1-12(Spec)

Year 5 (6 hours)
PSY 990 - Internship A: Professional Services 3-6(Spec)
PSY 991 - Internship B: Professional Services 3-6(Spec)

Total: 108 Semester Hours

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 College of 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 536 - 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 foundation 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**

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 I (6 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(1-3)

**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)**

Select from the following:

- 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
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's 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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<th>GPA</th>
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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 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 Course 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)
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

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<th>Admission Requirement Snapshot</th>
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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 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 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)

(Continued)
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 3-6(Spec)
PSY 991 - Internship B: Professional Services 3-6(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.

PSY 533 Psychology of Racism 3(3-0)
This course explores racism from a cognitive-social 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, and job systems related to individual differences within organizations to improve job performance and satisfaction. Topics include job analysis, criterion development, personnel selection, training, and performance evaluation. Prerequisites: PSY 336, or graduate standing; Recommended: PSY 211.

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 and PSY 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 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. Identical to SPE 530. Credit may not be earned in more than one of these courses. 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: Fifteen hours of psychology or graduate standing.

PSY 584 Cognitive Neuroscience 3(3-0)

Converging evidence from human neuroanatomy and neurophysiology, cognitive psychology, neuropsychology, and neuroimaging research will be examined for topics in attention, perception, memory, language, and emotion. Prerequisites: PSY 387 or graduate standing.

PSY 585 Psychophysiology 3(3-0)

Introduction to psychophysiological methods, measures, and applications. Topics include: basic neuroanatomy and neurophysiology; electrophysiological recording; inference using brain, cardiovascular, somatic measures; biofeedback; ergonomic, and other applications. Prerequisite: PSY 387 or graduate standing.

PSY 586 Applied Behavioral Analysis in Education 3(3-0)

Behavior modification techniques in the areas of motivation, elimination of undesirable behaviors, promotion of academic participation, and definition of behavioral objects. Prerequisites: PSY 100, and upper-division 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 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 behavioral 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)

An 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 major ideas, 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)
Intellectual 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 behavioral 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/or 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 657.

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 psychoeducational 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: Matriculation in Psychology graduate program.

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 789 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 A: 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 I B: 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 II A: 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 II B: 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 3-6(Spec)
Develop competencies in psychological services, program development, evaluation, needs assessment and/or delivery systems; PSY 990-991 constitutes a full-time year-long experience. CR/NC only. Prerequisites: Matriculation in psychology doctoral program, complete MA thesis, pass comprehensive exams, dissertation proposal completed and accepted, and permission of instructor.

PSY 991 Internship B: Professional Services 3-6(Spec)
Continuation of 990 as a full-time, year-long experience. Prerequisite: PSY 990.
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 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 College of Graduate Studies. In addition, applicants for admission to the RPL programs must:

A. Have a bachelor’s degree with:
   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.

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)

Selected 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-requisites: 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 is approved for offering in a distance learning format. Prerequisites: 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-requisites: 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.

- RPL 581 - Therapeutic Recreation: Issues and Trends 3(3-0)
  - Current issues and trends related to therapeutic recreation service delivery including: professional credentialing, third-party reimbursement, accreditation standards, legislation, ethics, and other administrative issues. Prerequisite: RPL 210 or graduate status. Pre/Co-requirements: Two of the following RPL 340, 341, 342, 344, 345.

- RPL 600 - Advanced Issues in Recreation 1-6(Spec)
  - Advanced concentration study of a current recreation or park administration problem or issue. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

- RPL 603 - Advanced Independent Reading in Recreation 1(Spec)
  - Exploration of one or more aspects of the recreation, parks, and leisure services profession through individual study. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

- RPL 605 - Administration of Leisure Services Systems 3(3-0)
  - The administrative aspects of operating recreation, parks, and leisure services systems. Emphasis on advanced administrative principles, practices, methods, and issues. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

- RPL 610 - Leisure Research 1(1-0)
  - Introduction to leisure research methodology. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

- RPL 611 - Evaluation in Recreation and Leisure Services 3(3-0)
  - A study of evaluation and its application to the field of recreation and leisure services. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MSA program.
RPL 615 Practicum in Recreation Supervision and Administration 1-6(Spec)
Supervised and practical experience in some facet of recreation or park administration or supervision. Not applicable for RPL Masters candidates, except to fulfill requirement deficiencies. CR/NC only. Prerequisite: Permission of instructor.

RPL 618 Issues in Leisure 3(3-0)
Theories of leisure behavior and current issues and trends in leisure. Topics discussed are dependent upon interests of students enrolled in class. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MSA program.

RPL 619 Continuing Registration for Final Research Project 1(1-0)
An on-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 MA or MSA in Recreation & Park Administration program.

RPL 620 Planning for Parks and Recreation Facilities 3(3-0)
Principles and procedures in the planning, development, and maintenance of park and recreation areas and facilities. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 636 Recreation Facility Operations and Management 3(3-0)
Administrative practices for the management and operations of areas and facilities for recreation and leisure services.

RPL 640 Recreation Program and Event Administration 3(3-0)
Principles and procedures in the conceptualization, planning, administration, operations, and evaluation of recreation programs and special events. This course may be offered in a hybrid or online format. Prerequisite: Admission to the MSA program.

RPL 652 Outdoor Recreation 3(3-0)
Focus on state, national, and international agencies involved in the provision of programs and services for outdoor recreation. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 698 Graduate Internship 1-6(Spec)
Advanced internship experience, performed under a certified or trained professional in a recreation/leisure setting for a 15-week period. Prerequisite: Permission of instructor.

RPL 699 Graduate Project 1-6(Spec)
Student proposes, implements, and evaluates an advanced, in-depth administrative or supervisory level applied project. Prerequisite: Permission of instructor.

RPL 791 Independent Study 2(Spec)
Independent research in a topic of interest. Topic must be approved prior to enrollment. Not open to students taking RPL 798. Prerequisite: Permission of instructor. Recommended: PES 670 or HEV 597.

RPL 798 Thesis 1-6(Spec)
A written thesis and oral defense of research conducted in the leisure services field. The thesis must be approved by the candidate's graduate committee and advisor. Not open to students enrolled in RPL 791. Prerequisite: Permission of instructor. CR/NC only.

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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., P.Ph.D.

Raju Chowdhary, PT, MHS, NCS, GCS

Jessica Garden 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., DHSc, HPCS

Matthew Stack, PA-C, M.S.

Ksenia Ustinova, P.T., Ph.D.

Robert Wintermayer, 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

**ADMISSION REQUIREMENT SNAPSHOT**

GPA: 3.0

Entrance Exam: GRE

Application Deadline: September 1, 2014

(for the 2015 entering class)

See Admission Requirement Details Below

Admission for 2015 Entering Class

Please reference the PA Admission website https://www.cmich.edu/colleges/CHP/hp_academics/physician_assistant/admissions/Pages/default.aspx to determine application requirements. The application deadline for the 2015 entering class is September 1, 2014, 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, 2014. The GRE code for electronic mailing from ETS to CASPA is: 0518 Central MI CASPA. Admission to the program is competitive. For further information, contact The Herbert H. and Grace A Dow College of Health Professions Admissions Office at 989-774-1730 or by e-mail: chpadmit@cmich.edu.

To be eligible for admission, a prospective student must:

- complete a minimum of 100 paid direct patient care hours by September 1, 2014;
- complete or be in the final stages of completing an undergraduate degree;
- complete all prerequisites prior to the beginning of the Physician Assistant program;
- obtain a minimum of 3.0 (a grade of B) in each prerequisite course;
- obtain an overall, undergraduate cumulative GPA of at least 3.0;
• submit official GRE scores (and official TOEFL scores, if applicable);
• submit all application requirements - reference: https://www.cmic.edu/colleges/CHP/hp_academics/physician_assistant/admissions/Pages/Application-Requirements.aspx

At its March 2014 meeting, the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) has placed the Central Michigan University Physician Assistant program sponsored by Central Michigan University on Accreditation - Probation until its focused visit review in March 2016. Probation is a temporary status of accreditation limited to two years and conferred when a program does not meet the Standards and when the capability of a program to provide an acceptable educational experience for its students is threatened. Once placed on probation, programs that still fail to comply with accreditation requirements in a timely manner, as specified by the ARC-PA, may be scheduled for a focused site visit and/or risk having their accreditation withdrawn. Specific questions regarding the program and its plans should be directed to the program director (sardi011@cmich.edu) and/or the appropriate institutional official(s).

Prerequisite Courses for Physician Assistant Program

Listed below are the prerequisite courses that must be completed prior to the beginning of the Physician Assistant program. Students completing the prerequisites at other universities are encouraged to 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.cmic.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
• 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, BIO 500, STA 282 or PSY 211

Like all programs that have competitive admissions, students meeting the admission criteria are not guaranteed admission to the program.

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(2-0)
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)

Second Year - Spring (16 hours)
PHA 691 - Clinical Education II 16(0-40)

Third Year - Summer (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, neoplasm 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)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.
Admission into the Physician Assistant Program.

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 clinical 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/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/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/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.

PHA 652 Diagnostic Tests III 2(1-2)
Indications for and interpretation of imaging of the central nervous system, vascular system, abdomen and extremities. Principles of nuclear medicine, magnetic resonance, and computed tomography. Prerequisites: PHA 651.

PHA 660 History and Physical Examination I 3(2-2)
Integrated didactic/laboratory course. This course teaches assessment via the medical history with focus on interviewing skill and technique. It prepares students for the clinical setting. Prerequisites: admission to the Physician Assistant program.

PHA 661 History and Physical Examination II 3(2-2)
Integrated didactic/laboratory series that teaches patient assessment through the complete medical history and physical examination. It prepares students for the clinical setting. Prerequisites: admission to the Physician Assistant program; successful completion of PHA 660.

PHA 662 History and Physical Examination III 4(2-4)
Integrated didactic/laboratory series that teaches patient assessment through the complete medical history and physical examination. It prepares students for the clinical setting. Prerequisites: admission to the Physician Assistant program; successful completion of PHA 661.

PHA 671 Preventive Medicine 1(1-0)
This course introduces the principles of preventive medicine and methods for their incorporation into primary care on an individual, family and community basis. Prerequisites: Admission to the Physician Assistant program.

PHA 672 Applied Ethics for Physician Assistants 2(2-0)
This course enables the student to examine the principles of medical ethics, develop an organized process to resolve clinical dilemmas, and to explore future professional roles. Prerequisites: admission to the Physician Assistant program.

PHA 673 Psychiatry 3(3-0)
The course includes the identification and management of psychiatric disorders, with an emphasis on the pharmacological management of mood disorders. Prerequisites: admission to the Physician Assistant program.

PHA 679 Clinical Education I 16(0-40)
This course consists of a full-time clinical internship. CR/NC only. Prerequisites: admission to the Physician Assistant program; successful completion of didactic course work for Physician Assistant program.

PHA 691 Clinical Education II 16(0-40)
This course consists of a full-time clinical internship. CR/NC only. Prerequisites: admission to the Physician Assistant program; PHA 679.

PHA 692 Clinical Education III 16(0-40)
This course consists of a full-time clinical internship. CR/NC only. Prerequisites: admission to the Physician Assistant program; PHA 691.

PHA 694 Clinical Clerkship Remediation 3-9(Spec)
A structured course of remedial education for students who do not show adequate progress during their clinical clerkship year. CR/NC only. May be taken no more than three times. Prerequisites: PHA 692.

PHA 697 Special Topics for Physician Assistants 1-9(Spec)
Presentation and examination of special topics in medicine, health, and biosciences. May be taken up to a maximum of 9 hours. Prerequisites: Entry into the Physician Assistant Program.
Doctor of Physical Therapy (DPT)
Debbie Silkwood-Sherer, Interim Director
HPB 1232, 774-1337

Minimum Totals for Graduation: 118 - 131 hours

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 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

Application Requirement web-page:
https://centrallink.cmich.edu/academics/health_professions/hp_academics/physical_therapy/Pages/Admissions.aspx

Admission Deadline: See the complete Application Process Instructions referenced below

Admission Requirements, Retention & Termination Standards

GPA: 3.0

GPA Requirement Snapshot

Admission to 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.
   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.

     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.

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/PES 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 I 2(1-2)
PTH 645 - Patient Care I 5(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 5(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/PES 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 5(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)

(Continued)
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 prospective research project or
- 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)
An 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 pediatrics 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)
An 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.

PTH 635 Examination and Diagnosis I 2(1-2)
Theory, concepts, and procedures central to examination and diagnosis of patients with dysfunctions or disabilities involving the musculoskeletal system, with laboratory practice in selected measures. Prerequisites: Admission to the Physical Therapy Program. Co-requisite: PTH 645.

PTH 636 Examination and Diagnosis II 2(1-2)
Theory, concepts, and procedures central to examination and diagnosis of patients with dysfunctions or disabilities involving the musculoskeletal system, with laboratory practice in selected measures. Prerequisites: PTH 635. Co-requisite: PTH 646.

PTH 645 Patient Care I 5(3-4)
An introduction to the skills and techniques needed in the care of patients. Problem-solving, communication, general patient care and safety will be emphasized. Prerequisites: admission to the Physical Therapy program.
Rehabilitation and Medical Sciences

PTH 646 Patient Care II 5(3-4)
An introduction to evaluation procedures and interventions used for patients with a variety of dysfunctions involving the musculoskeletal system. This orthopedic intervention course is designed to integrate with other courses in a semester focused on orthopedics. Prerequisites: Admission into physical therapy program, PTH 645, concurrent enrollment in PTH 633, concurrent enrollment in PTH 636.

PTH 655 Teaching and Learning in Physical Therapy 2(2-0)
Theory and research on learning development and instruction as it relates to the role of physical therapists as teachers and learners in a variety of situations/settings. Prerequisites: admission to the Physical Therapy program.

PTH 661 Manual Therapy I 1(0-2)
Lab demonstration/participation is used to study foundational manual therapy techniques used in physical therapy for the treatment of extremity dysfunctions and associated painful postures. Prerequisites: PTH 646; admission to the Physical Therapy program.

PTH 662 Manual Therapy II 2(0-4)
The study of manual techniques used in physical therapy for the treatment of spine dysfunction and associated painful posture. Prerequisites: PTH 661, admission to the Physical Therapy program.

PTH 663 Proprioceptive Neuromuscular Facilitation 2(2-0)
This course introduces the treatment techniques and procedures that are integral to proprioceptive neuromuscular facilitation in treating neuromuscular or musculoskeletal problems. Prerequisites: PTH 745, admission to the Physical Therapy program.

PTH 665 Physical Therapy Seminar I 1(1-0)
The study of professional issues in physical therapy. Course will focus on health care delivery and practice issues. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 666 Physical Therapy Seminar II 1(1-0)
The study of professional issues in physical therapy. Course will focus on practice, political and demographic issues. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 672 Clinical Anatomy and Kinesiology of Human Joints 4(3-3)
Anatomical and kinesiological overview of joints in the human body. Includes anatomy, histology of musculo-skeletal tissue, joint biomechanics, arthrokinematics, osteokinematics and study of human gait. Prerequisites: HSC 630 and admission to the Physical Therapy program.

PTH 690 Motor Learning in Neurorehabilitation 2(2-0)
Students will examine the current theory on motor learning and make applications to case studies in rehabilitation. Prerequisites: admission to the Physical Therapy program.

PTH 692 Clinical Biomechanics 2(1-2)
Addresses advanced topic areas in clinical biomechanics. Areas include special cases for gait, kinetic chain activities, and the mechanical bases of clinical practice.

PTH 695 Ethics in Physical Therapy 3(3-0)
The course introduces biomedical ethics principles to students in physical therapy education programs. Students are instructed in ethical theories and decision-making strategies. Credit may not be earned in more than one of these courses. Prerequisites: admission to the Physical Therapy program.

PTH 710 Principles of Clinical Management 3(3-0)
Study of Administrative and organizational activities needed in a physical therapy clinic. Personnel, quality assurance, reimbursement, and legal issues are examined. Prerequisites: admission to the Physical Therapy program.

PTH 732 Clinical Education III 3(1-4)
A mock clinic format is utilized to introduce students to specific clinical situations. Patient management skills for complex clinical case studies are emphasized. CR/NC only. Prerequisites: admission to the Physical Therapy program, PTH 634.

PTH 735 Examination and Diagnosis III 2(1-2)
Theory, concepts, and procedures central to examination and diagnosis in neurological physical therapy practice, with laboratory practice in the application of selected measures. Prerequisites: PTH 636. Co-requisite: PTH 745.

PTH 736 Examination and Diagnosis IV 2(1-2)
Theory, concepts, and procedures central to examination and diagnosis of patients with dysfunctions or disabilities involving selected multiple systems, with laboratory practice in selected measures. Prerequisites: PTH 735; Co-requisite: PTH 746.

PTH 745 Patient Care III 5(3-4)
Students are instructed in skills for the care of patients. Neurologic case studies, standardized testing, education and management issues are emphasized. Prerequisites: PTH 626, PTH 646; admission to the Physical Therapy program.

PTH 746 Patient Care IV 4(3-2)
Students are instructed in skills for the care of patients. Cardiopulmonary oncology, burn care, chronic pain and chronic conditions are emphasized. Prerequisites: admission to the Physical Therapy program, PTH 745.

PTH 765 Physical Therapy Seminars III 1(1-0)
The study of professional issues in physical therapy. Course will focus on social, business and government issues. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 766 Physical Therapy Seminars IV 1(1-0)
The study of professional issues in physical therapy. Course will focus on ethical, educational and practical issues. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 790 Clinical Research I 4(4-0)
First of two courses sequence to satisfy the doctoral project requirements for physical therapy program. Students complete either (a) a prospective research project or (b) clinical case report. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 791 Independent Study 1-3(Spec)
Students engage in independent study on a topic related to physical therapy. Students work with a faculty sponsor to outline the project requirements and complete the activities. Prerequisites: admission into the Graduate Program in Physical Therapy and a written proposal approved by the Physical Therapy Program Director.

PTH 792 Special Topics in Physical Therapy 1-9(1-9)
Exploration of current special topics in physical therapy examination and intervention. May be repeated to a maximum of 9 credits. Prerequisites: Admission to the Physical Therapy Program.

PTH 825 Health Promotion in Physical Therapy Practice 2(2-0)
Overview of health promotion in physical therapy practice. Focus on health needs assessment, implementing health promotion interventions, and evaluating program effectiveness with individuals and groups. Prerequisites: admission to the Physical Therapy Program.

PTH 832 Clinical Education IV 12(Spec)
This course consists of a full-time clinical internship. The student will have 16 weeks of clinical experience. Students will be affiliated with various clinical sites throughout Michigan and the U.S. CR/NC only. Prerequisites: admission to the Physical Therapy program, and permission of instructor. Concurrent enrollment for students selecting PTH 790.
PTH 850 Evidence Based Practice in Physical Therapy 2(2-0)
Principles of evidence based practice applied to the physical therapy profession. Students will learn to gather and evaluate evidence and incorporate it into clinical practice. Prerequisites: HSC 670, admission to the Physical Therapy Program.

PTH 860 Health Informatics for Physical Therapists 2(2-0)
Exploration and application of health informatics in support of patient care, teaching, research and health care administration applicable to physical therapy. Prerequisites: admission to the Physical Therapy Program.

PTH 870 Rehabilitation Care Management 3(3-0)
Students develop skills for primary care management in rehabilitation services. Content areas include: keep/referral decision making, patient advocacy, utilization of public health agencies, and cultural issues. Prerequisites: admission to the Physical Therapy Program.

PTH 890 Clinical Research II 4(4-0)
Second of two courses sequence to satisfy the doctoral project requirements for physical therapy program. Students complete (a) a prospective research project or (b) clinical case report. CR/NC only. Prerequisites: admission to the Physical Therapy Program.

PTH 891 Fall Assessment and Prevention 1(1-0)
This course presents comprehensive fall assessment and prevention programs. Evaluation of risk factors for falling and prevention strategies are emphasized. Prerequisites: Admission to the Graduate Program in Physical Therapy.

PTH 893 Imaging in Physical Therapy 1(1-0)
Study and application of patient imaging in the practice of physical therapy. Prerequisites: PTH 634 and admission to the Physical Therapy Program.

PTH 894 Issues and Practice in Women’s Health 1(1-0)
Issues in physical therapy evaluation, examination, and management of female patients/clients. Unique conditions of female adolescents, the childbearing years, midlife, and aging are discussed. Prerequisites: PTH 634 and admission to the Physical Therapy Program.

PTH 932 Clinical Education V 12(Spec)
This course consists of a 16 week full-time clinical internship. Students will be affiliated with various clinical sites throughout Michigan and the U.S. CR/NC only. Prerequisites: admission to the Physical Therapy program, PTH 832, and permission of the instructor. Concurrent enrollment in PTH 890.

Course Descriptions: ATR

ATR 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 HPS 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.
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)
An 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, organizations, 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 IIIB 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 processes 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. Credit/No Credit 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 300 or both SOC 200 and 350; SOC 301; or regular admission to the Sociology Graduate Program.

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 studies; 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 course which provides field experience for students enrolled in the Youth Studies minor. Students spend time working with youth in various community settings and meet periodically on campus to systematically reflect on practical field experience. Prerequisites: SOC 100, 222, 311, 411, 412, 425; or graduate standing Co-requisites: Concurrent enrollment in SOC 411, 412, and/or 425 is permitted.

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, postmodernism, black feminism, thought development, critical racism, critical theory, postmodernism, and other sociological theories of contemporary relevance. Prerequisites: 15 hours of sociology and graduate standing.

SOC 602 Professional 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 quantitative and qualitative 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 ethnic, religious, 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)
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 Ethnohistory 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  Michigan Archaeology 3(3-0)
Examination of prehistoric cultural trends and societies in Michigan, and impact of historic Euroamerican settlement within the context of broader trends in eastern North America. Prerequisites: ANT 175 and one of the following ANT 340, 344, 348; or Graduate standing.

ANT 588  Special Topics in Anthropology 1-10(Spec)
Consideration of subject matter not included in courses currently listed in catalog. Prerequisite: 15 credit hours in Anthropology or Graduate standing.

ANT 590  Gender, Culture & Society 3(3-0)
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 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

Larry Corbett, Chairperson
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Abalo Adewui, Ed.D., curriculum and instruction
Mary Williams Aylor, Ph.D., early childhood
Norma Bailey, Ed.D., middle school education
Lorraine Berak, Ph.D., educational administration, labor and industrial relations
Timothy Brannan, Ph.D., educational technology
Shane Cavanaugh, Ph.D., educational psychology
Natalia Collins, Ph.D., educational psychology
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
Elizabeth Keeney, Ph.D., clinical supervision
William Leibfritz, Ph.D., elementary mathematics
Xiaoping Li, Ed.D., literacy education
James McDonald, Ph.D., science education
Kathleen Moxley, Ph.D., teaching, curriculum, and educational policy language and literacy
Krystyna Nowak-Fabrykowski, Ph.D., early childhood
Howard Parkhurst, Ph.D., curriculum and instruction
Joseph Rivard, Ph.D., reading, educational psychology, educational technology
Leone Rose, Ph.D., elementary education, literacy 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) 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 Requirement Snapshot
GPA: 2.7
Entrance Exam: N/A
International Application Deadline: July 1 (Fall), Oct. 1 (spring)
See Admission Requirement Details Below

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 Z5 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 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(2-3)
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(2-3)
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)

(Continued)
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

Note: EDU 780 is offered on the Mt. Pleasant campus only and should be the last course taken to fulfill the Plan B requirements before taking the comprehensive written examination.

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.

Master of Arts (M.A.) in Elementary Education (EDU)

Minimum Totals for Graduation: 30 - 33 hours

Guide Sheets specifying requirements for all the department's programs may be obtained from 421 EHS Building or on the department website.

Admission Requirements, Retention & Termination Standards

| 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 meeting the university's general admission requirements, the student must have a valid Michigan elementary teaching certificate or the equivalent. Courses taken to meet this admission requirement shall not count toward the master's degree. Those who do not possess the elementary teaching certificate should contact the Center for Student Services for information on how to meet certification requirements. Advisors for the master's program are assigned only after the student has been regularly or conditionally admitted to the College of Graduate Studies and has selected a concentration.

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.

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 24 hours of course work and a thesis (6 hours of thesis credit), total 30 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.

Degree Requirements

Required Core Courses (15 hours)
Select one of the following plans:

Plan A
- EDU 660 - Methods of Educational Research 3(3-0)
- EDU 682/PSY 682 - Psychology of Child Development 3(3-0)
- EDU 698 - Thesis 1-6(Spec)
- EDU 755 - Advanced Research Design and Interpretation 3(3-0)

Plan B
- 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)

Required Cognate Courses (15 hours)
Select 15 hours from the following:
- EDU 506 - Principles and Techniques for Individualizing Instruction 3(3-0)
- EDU 540 - Literacy Education: Theory and Practice 3(3-0)
- EDU 620 - Problems of Teaching Mathematics in the Elementary School 3(3-0)
- EDU 635 - Problems in Language Arts in the Elementary School 3(3-0)
- EDU 636 - Classroom Reading and Writing Instruction 3(3-0)
- EDU 640 - History and Trends in Elementary Social Studies Education 3(3-0)
- EDU 645 - Advanced Science Teaching Methods 3(3-0)

Electives (0-3 hours)
Select with approval of advisor for Plan B only.

Total: 30-33 semester hours

Note: EDU 780 is offered on the Mt. Pleasant campus only and should be the last course taken to fulfill the Plan B requirements before taking the comprehensive written examination. 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.

Master of Arts (M.A.) in Secondary Education

Minimum Totals for Graduation: 30 - 33 hours

Admission Requirements, Retention & Termination Standards

| GPA: 2.7 | Entrance Exam: N/A |
| Internet Application Deadline: July 1 (Fall), Oct. 1 (spring) | See Admission Requirement Details Below |

In addition to meeting the university's general admission requirements, the student must have a valid Michigan secondary teaching certificate or the equivalent. Courses taken to meet this admission requirement shall not count toward the master's degree. Those who do not possess the secondary teaching certificate should contact the Center for Student Services for information on how to meet certification requirements.
Advisors for the master's program are assigned only after the student has been regularly or conditionally admitted to the College of Graduate Studies and has selected an option.

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. Students must earn a B- or better in each graded course.

Program Requirements
All candidates for the M.A. must fulfill requirements for scholarly activity under Plan A (thesis) or Plan B (comprehensive written exam). Plan A requires a minimum of 24 hours of coursework and a thesis (6 hours of thesis credit).

Plan B requires a minimum of 30 hours of coursework, a 3 hour capstone experience (EDU 780) which explores research pertinent to all Master of Arts in Secondary Education students, and a comprehensive four (4) hour examination over the coursework in the student's M.A. Program. 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.

Degree Requirements:

Required Core Courses
Select one of the following plans:

Plan A (18 hours)
EDU 609 - History of Education 3(3-0)
EDU 628 - Secondary School Programs and Practices 3(3-0)
EDU 660 - Methods of Educational Research 3(3-0)
EDU 698 - Thesis 3(Spec)
EDU 755 - Advanced Research Design and Interpretation 3(3-0)

Plan B (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)
EDU 780/MLE 780 - Master of Arts Capstone Experience 3(3-0)

Notes:
- EDU 780 is offered on the Mt. Pleasant campus only and should be the last course taken to fulfill the Plan B requirements before taking the comprehensive written examination.
- 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 tenured/tenure-track faculty in coursework offered by the CMU Global Campus.

Required Courses (6 hours)
Secondary education courses selected with advisor's approval.

Courses in Emphasis (6-15 hours)
Courses in Emphasis to be selected with advisor's approval. Must be taken from one of the following departments:

Electives (6 hours)
To be selected with advisor's approval.

Total: 30-33 semester hours

Note: Plan A requires students to complete at least 30 hours of total credit. Plan B requires students to complete at least 33 hours of total credit.

Master of Arts (M.A.) in Reading and Literacy K-12 (EDU)

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
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 tenured/tenure-track faculty in coursework offered by the 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 3(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:

(Continued)
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)
- TAI 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 for 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

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**Degree Requirements**

**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
**Internet 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 counted on the program. Students must earn a B- or better in each graded course within the 9 hours taken.

Advisors for the master's program are assigned only after the student has been regularly or conditionally admitted to the College of Graduate Studies 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)

(or courses selected in consultation with graduate advisor.)

**Total:** 33 semester hours (minimum)
Doctor of Educational Technology (D.E.T.)

Minimum Totals for Graduation: 87 hours

This program will be open for enrollment through Global Campus, pending approval of the Higher Learning Commission. Contact the department for further information.

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 |
| Priority Deadline: March 1 | See Admission Requirement Details Below |

Admission

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 Analysis 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 Analysis 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)

IELTS:
- Regular Admission: 6.5
- Conditional Admission: 6.0 or 5.5

MELAB:
- Regular Admission: 80

TOEFL Exempt countries list: www.grad.cmich.edu/toefl

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 not earned a Master’s Degree from an accredited university will be enrolled in the online MA in Educational Technology program.

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 - Quantitative 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(3-0)
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)

(Continued)
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

Course Descriptions: ECE

ECE 625 Foundations of Early Childhood Education 3(3-0)
Examination of philosophical, historical, social, theoretical, and ethical factors that have shaped and continue to shape early childhood education; implications for effective professional practice.

ECE 628 Language and Literacy Development of Young Children 3(3-0)
Analysis, synthesis, and application of theories and research in language and literacy development in the education of young learners.

ECE 629 Promoting Parent Involvement in Early Childhood Education 3(3-0)
Analysis of current research findings on how teachers can increase parent involvement in early childhood programs. Action research on improving parent-school partnership.

ECE 630 Culturally Responsive Early Childhood Programs 3(3-0)
An analysis of current research findings on multicultural education and implementation of culturally responsive practice in early childhood programs.

ECE 644 Early Childhood Concept Development and Creativity 3(3-0)
Examination of theory, research, and practice related to concept development and creativity in young children.

ECE 657 Cognitive and Psycho-Motor Development of Young Children: Theory & Practice 3(3-0)
An analysis of current research findings on cognitive and psycho-motor development of young children.

ECE 777 Seminar: Current Issues in Early Childhood Education 3(3-0)
Analysis of existing and emerging current issues in early childhood education with opportunities for in-depth study of areas of concern. Prerequisite: Elementary Teaching Certificate.

Course Descriptions: EDU

EDU 505 Diagnostic Literacy Assessments & Instruction: K-3 3(3-0)
Diagnostic literacy assessments will be introduced including appropriate administration, data analysis, and related instructional practices. State literacy assessment certification: MLPP K-3. Prerequisites: EDU 330 or graduate status.

EDU 506 Principles and Techniques for Individualizing Instruction 3(3-0)
Examination of individualized instruction and its classroom implications. Prerequisite: EDU 330 or EDU 340.

EDU 508 Education Workshop 1-6(Spec)
Identification and study of educational theory, topics and/or issues in contemporary education. Prerequisites: Senior Standing or Graduate Status.

EDU 525 Early Childhood Education 3(3-0)
Content, methods, materials, and curriculum planning for teaching pre-kindergarten through primary grades. Prerequisites: Junior Standing or Graduate Status.

EDU 528 Emergent Literacy: Theory and Practice 3(3-0)
Analysis of literacy development in preschool through primary grades. Methods, materials, organization, and evaluation techniques for fostering beginning reading and writing consistent with current research. Prerequisites: EDU 330 or graduate standing.

EDU 532 Reading in the Content Areas 3(3-0)
Emphasizes teaching of reading skills in content areas focusing on the middle and upper grades. Prerequisites: EDU 330 or EDU 316.

EDU 533 Diagnosis and Treatment of Reading Difficulties 3(2-3)
Diagnostic procedures and use of remedial and developmental techniques. Exploration of the role of the specialist. Prerequisites: EDU 431, 532; Pre/Co-Requisite: EDU 538.

EDU 538 Coordination of the Language Arts with Reading 3(3-0)
Building the elements of listening, speaking, writing, and reading into a K-8 language arts program. Techniques of instruction for the exceptional child will be examined. Prerequisite: EDU 330.

EDU 540 Literacy Education: Theory and Practice 3(3-0)
Emphasizes a broad view of literacy within a comprehensive approach and authentic contexts; effective literacy instruction across content, all learners, skill integration, and assessment. This course is approved for offering in a distance learning format. Prerequisites: EDU 330 or Graduate Status.

EDU 542 Interdisciplinary Processes and Strategies in Teaching Reading, Writing, Thinking, and Learning 3(3-0)
Reinforces the integration of content knowledge with reading, writing, and thinking strategies and emphasizes a conceptual framework for learning through thematic or collaborative instruction. This course may be offered in an online or hybrid format. Prerequisites: EDU 330 or Graduate Standing.

EDU 550 Driver Education I: Driver Task Analysis 3(3-0)
First of four courses to prepare driver education instructors and provide them with the content knowledge and skills necessary to teach driver education. Prerequisites: Permission of instructor.

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 566 Independent Study in Elementary Education 1-6(Spec)
Research or project. Prerequisites: 15 semester hours of professional education and approval of unit coordinator.
EDU 590 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 290 or Graduate Status.

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 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)
Diagnosing 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)
History and trends in elementary school curriculum development. This course is approved for offering in a distance learning format.

EDU 606 Secondary Advanced Reading Diagnosis and Instruction 3(3-0)
Diagnosing reading and writing difficulties for diverse learners and implementing research-based intervention practices designed to improve literacy in the secondary 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 the relationship to 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; implications for teaching the nature of science. Prerequisites: EDU 615.

EDU 619 Continuing Registration for Final Research Project 1(1-0)
Annon-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 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 660.

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)
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)
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 770 Practicum in Systematic Curriculum Development 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 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 in an online or hybrid format. Prerequisites: EDU 660; Successful completion of 21 hours of coursework on 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 MILE 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 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 800.

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 an 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. Prerequisites: 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.

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-requirement: MLE 641.

MLE 643 Student Diversity Issues in the Middle Level Classroom 3(3-0)

Instructional strategies and assessment/evaluation methods and materials for middle level classroom teachers appropriate for the unique developmental needs and characteristics of young adolescents. 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 middle level students. 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.
Interdepartmental and Interdisciplinary Programs

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

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

GPA: 2.7
Entrance Exam: N/A

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 College of 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:
- EDL 676 - Administration of Community Colleges 3(3-0)
- EDL 680 - Teaching in Higher Education Settings 3(3-0)
- EDL 757 - Student Development Theory 3(3-0)
- EDL 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 the teaching environment. This is not a certification program for teacher or administrators but may be utilized for professional advancement.

**Required Courses (9 hours)**

- EDU 602 - Strategies and Techniques for Teaching 3(3-0)
- EDU 613/MLE 613 - Current Educational Issues 3(3-0)
- EDU 706 - Theory and Practice of Instruction 3(3-0)

**Emphasis (3-6 hours)**

Select one of the following emphases:

**Instruction Emphasis (3 hours)**

- EDU 770 - Practicum in Systematic Curriculum Development 3(3-0)

**Mathematics Emphasis (6 hours)**

Select two specific courses in Mathematics for 3 hours each.

**Reading Emphasis (6 hours)**

Select EDU 603 OR EDU 606, plus EDU 540:
- EDU 540 - Literacy Education: Theory and Practice 3(3-0)
- EDU 603 - Elementary Diagnosis, Remediation and Differentiation of Reading Instruction 3(3-0)
- EDU 606 - Secondary Advanced Reading Diagnosis and Instruction 3(3-0)

**Total: 30-33 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.

**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 the teaching environment. Specifically, it is designed to enhance the knowledge and skills of sciences 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)
- EDU 615 - Survey of Science Education 3(3-0)
- EDU 645 - Advanced Science Teaching Methods 3(3-0)
- GEL 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 612 - Methods and Techniques of Training and Development 3(3-0)
- EDL 620 - Administration Within Diverse Populations 3(3-0)
- EDL 624 - Planning for Instruction in Nontraditional Settings 3(3-0)
- EDL 626 - The Adult Learner 3(3-0)

**Total: 30 semester hours**
Master of Science in Administration (M.S.A.)
College of 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)

<table>
<thead>
<tr>
<th>GPA: 2.7</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>
<td>See Admission Requirement Details Below</td>
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</table>

Admission

To be admitted to the Master of Science in Administration program, a candidate must meet the requirements for regular admission to the College of Graduate Studies (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, only offered if the student has previously taken the course and earned a grade of "C" or better. Examinations may be taken twice and must be passed with at least 70% accuracy;
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 College of Graduate Studies policy. Students dismissed from the program may petition for readmission 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 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.

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 College of Graduate Studies. Any course taken without the express written consent of the MSA Director may not be approved for fulfillment of the degree requirements. Students are strongly encouraged to complete their accounting and statistic competency requirements within their first 12 semester credits.

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/er/administrative/academic/degree-candidacy.asp?yr=2012&level=GR&loc=onc) for the Graduate Bulletin or https://bulletins.cmich.edu/2012/er/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 (MSA699). This includes all Institutional Review Board (IRB) or research review application requirements. (MSA699 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.
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.
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; and
b. MSA Certificate programs must be completed within seven years prior to the awarding of the graduate certificate; and

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 an overall undergraduate grade point average (GPA) of at least 3.0 and have a minimum of 86 credit hours towards a Bachelor’s degree, including all General Education requirements (including transfer and AP credits), the semester that they apply for admission to the Accelerated MSA program. During the final academic year, students will complete 12 credits of coursework that will be counted toward both the undergraduate and graduate degrees. 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 of Science degree requirements during the final year. The student must earn a minimum of a 3.0 or higher in each course below to count toward the graduate program. If the student doesn’t earn a 3.0 or higher in each course that is intended to be applied to the graduate degree they must reapply for admission to the MSA program. The following courses are used for dual counting for the Bachelor’s degree and the Accelerated MSA Program:

Fall semester
MSA 600 - Foundations of Research Methods in Administration 3(3-0)
MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)

Spring semester
MSA 603 - Strategic Planning for the Administrator 3(3-0)
MSA 604 - Administration, Globalization and Multiculturalism 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.

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 527 - Purchasing Strategy 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 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)
PSC 514 - American Public Policy Making 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 provides moderate structure through study in areas that are applicable to a wide variety of administrative settings. In addition, the student is afforded considerable flexibility in designing 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 555 - Market and Sales Forecasting 3(3-0)
MSA 660 - Marketing Administration 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)
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)
PHL 518 - Professional Ethics 3(3-0)
PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
MSA 690 - Internship 1-3(Spec)
MSA 681 - Administrative Practicum 1-3(Spec)

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)

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.

Electives (3-6 hours)
- Select from 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)

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

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 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)

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)
  - PSY 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)
  - MGT 694 - Seminar in Organizational Development 3(3-0)

Note: Students may not count both COM 560 and COM 561 within the HRA 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.

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:

- 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

**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)**

- 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 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 1 3(3-0)
- PSC 642 - Problems and Processes of International Development 1 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:

- 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

**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)**

- 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 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)
MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
MSA 510 - Global Leadership Perspectives 3(3-0)
MSA 696 - Special Topics 3(3-0)
PBL 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.

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

Long-Term Care Administration

Note: CMU is not currently accepting students into this program.

The Long-Term Care Administration concentration enables students to enhance their knowledge and skills in the areas of health services administration, long-term care administration, and resident care issues. This program is offered through Global Campus only.

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 (18 hours)
GRN 632 - Public Policy and Aging 3(3-0)
HSC 520 - Health Services Administration 3(3-0)
HSC 570 - Financial Aspects of Health Services Organizations 3(3-0)
HSC 591 - Legal & Regulatory Aspects of Long-Term Care Administration 3(3-0)
HSC 592 - Administration Issues in Long-Term Care Administration 3(3-0)
HSC 593 - Resident Care Issues in Long-Term Care Administration 3(3-0)

Note: Students who have taken HSC 520 and/or HSC 570 as part of another concentration may select substitutes from the following courses: GRN 631, HSC 506, HSC 507, HSC 545, HSC 572, or HSC 581.

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 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)
RPL 521 - Fund Development & Grant Writing for Public & Nonprofit 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:
EDC 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)

(Continued)
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 (12 hours)

- MSA 614 - Ethics in Research Administration 3(3-0)
- 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)

Electives (9-12 hours)

Select from the following:

- MSA 660 - Marketing Administration 3(3-0)
- MSA 611 - Contract Administration 3(3-0)
- MSA 612 - Grants Fiscal Administration 3(3-0)
- MSA 613 - Project Administration 3(3-0)
- MSA 614 - Ethics in Research Administration 3(3-0)

Sport Administration

The Sport Administration concentration is designed to prepare the student for a career in administration in college, professional, or commercial sport. 15-18 hours to be selected with the consent of a PES Graduate Faculty Advisor. Course substitutions may be made upon recommendation of the PES Graduate Advisor and approval of the Graduate Office if the course content of the course to be substituted is essentially the same as the course it will replace.

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 from the following:
PES 603 - Administration of Sport 3(3-0)
PES 620 - Sport - An Interdisciplinary Study 3(3-0)
PES 625 - Facilities for Sport and Physical Education 3(3-0)
PES 640 - Sport and the Law 3(3-0)
PES 650 - Sport Marketing 3(3-0)
PES 690 - Practicum 1-4(Spec)
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

Vehicle Design & Manufacturing Administration

Note: CMU is not currently accepting students into this program.

The Vehicle Design and Manufacturing Administration (VDMA) concentration prepares students to take leadership responsibility in vehicle design and manufacturing administration.

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 (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 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)

Note: No more than a total of 15 hours of College of Business courses may be used on the program plan.

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
- Long-Term Care Administration
- Philanthropy and Fundraising
- Public Administration
- Research Administration
- Vehicle Design and Manufacturing Administration

Note: Not all certificates are available at the main campus location.

The 15-18 credit MSA Graduate Certificate program is designed for regularly admitted graduate students who desire advanced training in the field of administration. Credits successfully earned with the certificate program may be used toward the MSA degree, if the concentration is the same. A maximum of six (6) semester hours from a previous or concurrent graduate degree or certificate can be transferred toward a graduate certificate. Students may substitute courses only with the approval of the MSA Director. Students may use up to 6 transfer credits providing they meet the criteria for transfer credit outlined in this bulletin. Coursework and other requirements must be completed within seven years prior to the awarding of a graduate certificate. Prior learning credit may not be used on the certificate program.

Note: Students may not use more than 12 credits of College of Business courses. Required courses: 5-6 credits from the appropriate concentration.

Acquisitions Administration Certificate

Minimum Totals for Graduation: 15 hours

Required Courses (6 hours)
MGT 533 - Purchasing Strategy 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

Electives (9 hours)
Select three 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)
PSC 514 - American Public Policy Making 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 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)

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 - Management 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)
EDL 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 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 1 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

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)
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 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)

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 645 and PSY 536 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.
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 I 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)
MSA 501 - Managing Change with Emotional Intelligence 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

Long-Term Care Administration Certificate

Note: CAU is not currently accepting students into this program.

Minimum Totals for Graduation: 18 hours
Required Courses (18 hours)
GRN 632 - Public Policy and Aging 3(3-0)
HSC 520 - Health Services Administration 3(3-0)
HSC 570 - Financial Aspects of Health Services Organizations 3(3-0)
HSC 591 - Legal & Regulatory Aspects of Long-Term Care 3(3-0)
HSC 592 - Administration Issues in Long-Term Care 3(3-0)
HSC 593 - Resident Care Issues in Long-Term Care Administration 3(3-0)

Note: Students who have taken HSC 520 and/or HSC 570 as part of another concentration may select substitutes from the following courses: GRN 631, HSC 506, HSC 545, HSC 572, or HSC 581.

Total: 18 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 561 - American State Government and Administration 3(3-0)
PSC 563 - Politics and Policy in Urban Communities 3(3-0)
PSC 565 - Managing Modern Local Government 3(3-0)
PSC 566 - Intergovernmental Relations in the United States 3(3-0)
PSC 610 - Foundations of Public Administration 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:
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 561 - 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

Vehicle Design and Manufacturing Administration Certificate

Note: CMU is not presently accepting on-campus students into this program.
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 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)
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 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 600 Foundations of Research Methods in Administration 3(3-0)
An introduction to research methods designed to build the skills and knowledge necessary to conduct and interpret primary research in the field of administration. This course may be offered in an online or hybrid format. Prerequisite: Statistics competency.

MSA 601 Organizational Dynamics and Human Behavior 3(3-0)
Students examine and apply organizational theories aimed at understanding and analyzing human behavior in complex organizations. This course may be offered in an online or hybrid format.

MSA 602 Financial Analysis, Planning and Control 3(3-0)
Study of financial analysis, planning, and control techniques/methods emphasizing mechanisms used to determine the overall financial health of private, public and non-profit organizations. This course may be offered in an online or hybrid format. Prerequisites: Accounting competency.

MSA 603 Strategic Planning for the Administrator 3(3-0)
An examination of processes and approaches used by administrators to analyze internal and external environments to establish and accomplish long-term strategic organizational goals. This course may be offered in an online or hybrid format.

MSA 604 Administration, Globalization and Multiculturalism 3(3-0)
Focuses on theoretical and applied concepts and skills essential to successfully managing an environment of workplace diversity and multiculturalism within domestic and global organizations. This course may be offered in an online or hybrid format.

MSA 610 Environments in Administration 3(3-0)
Studies the impact of the economic, legal, political, technical, international, and social environments on administration. Presents the relevant concepts from these areas and analyzes their interrelationships. This course is approved for offering in a distance learning format.

MSA 611 Contract Administration 3(3-0)
Analysis of theories and applied concepts of federal and commercial contracts, planning contracts, budgeting and negotiating contracts and best practices in contracts. This course may be offered in an online or hybrid format.

MSA 612 Grants Fiscal Administration 3(3-0)
Study of and practical applications of grants accounting/financial-related tasks on federal, foundation, institutional and private awards. This course may be offered in an online or hybrid format. Prerequisites: MSA 602 or the permission of MSA Director.

MSA 613 Project Administration 3(3-0)
Intensive coverage of project administration and applications from concept through operations. Course focuses on planning, scheduling, controlling, economic analysis, evaluation/control and customer satisfaction. This course may be offered in an online or hybrid format.

MSA 614 Ethics in Research Administration 3(3-0)
Covers the ethical, legal, social issues and best practices involved in the administration and conduct of research and the application of products from research. This course may be offered in an online or hybrid format.

MSA 615 Sponsored Project Administration 3(3-0)
Examination of core aspects of sponsored project administration: institutional compliance, proposal creation, review and submission, contract negotiations, sub-award review, and post award financial administration. This course may be offered in an online or hybrid format.

MSA 616 The Practice of Research Administration 3(3-0)
Examines the theory and foundations of research administration in the context of departmental administration, tools for successful department administration, and the role of Research Administrator. This course may be offered in an online or hybrid format.
MSA 617 Clinical Research Administration 3(3-0)
This course examines clinical research as science as well as the administration of clinical research processes and programs. Covers protocol, budgets, ethics and funding. This course may be offered in an online or hybrid format.

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

MSA 620 Effective Administration and Organizational Behavior 3(3-0)
To develop an understanding of human problems and processes which help or hinder successful task completion. To improve interpersonal and diagnostic skills as well as theoretical knowledge. This course is approved for offering in a distance learning format.

MSA 622 Research Facilities Administration and Cost 3(3-0)
Study of the planning, operation, and costs associated with managing physical plants specific to research facilities. This course may be offered in an online or hybrid format.

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 675 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 681 Administrative Practicum 1-3(Spec)
Provide students with an introductory professional experience of an administrative/supervisory nature in an administrative setting. For students with limited or no administrative experience. Prerequisite: Permission of MSA Director.

MSA 685 Integrative Analysis of Administration 3(Spec)
MSA 685 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 634 or 635; MSA 603 or 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, cura-
tion, 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. 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. Students must complete at least 3 hours of HST 791.

Note: students must complete at least 3 hours of 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.

Addional 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 - Michigan 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 - 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 595 - 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(3-0)
HST 650 - Colloquium in European History to 1450 3(3-0)
HST 651 - Colloquium in Early Modern European History 3(3-0)
HST 652 - Colloquium in Modern European History 3-6(3-0)
HST 681 - Historic Preservation 3(3-0)
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.

**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.

**Required Courses (15 hours)**

- HST 690 - Advanced Readings in Latin American History 3(3-0)
- 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(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)
- HST 763 - Seminar in Latin American History 3(3-0)
- HST 795 - Seminar Abroad 3-15 Spec
- MKT 555 - Market and Sales Forecasting 3(3-0)
- MKT 560 - International Marketing 3(3-0)
- MST 546 - Introduction to Museum Work 3(3-0)
- MST 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 750 - 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 508QR - 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**

**Graduate Certificate in Cultural Resource Management**

**College of Humanities and Social & Behavioral Sciences**

**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**
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.

Admission Requirements, Retention & Termination Standards

<table>
<thead>
<tr>
<th>GPA: 2.7</th>
<th>Admission Requirement Snapshot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance Exam: N/A</td>
<td>Internat'l Application Deadline: July 1 (Fall), Oct. 1 (spring)</td>
</tr>
</tbody>
</table>

See Admission Requirement Details Below

Admission requirements are the same as those for admission to the College of Graduate Studies (baccalaureate degree and overall GPA of 2.7) and a minimum of 20 hours of coursework in areas of the Humanities (history, English, philosophy, etc.) with GPA of 2.7.

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

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)
Anon-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

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, Neuropsychology.

Michelle Steinhibl, 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 Master 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 and potential treatments for Alzheimer’s, Huntington’s, and Parkinson’s diseases, studying the CNS involvement in behavioral learning in the context of abused substances, and understanding the mechanisms underlying rehabilitation from movement disorders. Students are encouraged to contact Program faculty members in their area of research interest prior to submitting application materials.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Admission Requirement Snapshot

GPA: 3.0
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 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 1-4(Spec)
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 and potential treatments for Alzheimer’s, Huntington’s, and Parkinson’s diseases, studying the CNS involvement in behavioral learning in the context of abused substances, and understanding the mechanisms underlying rehabilitation from movement disorders. 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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<tr>
<th>Admission Requirement Snapshot</th>
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<tbody>
<tr>
<td>GPA: 3.0</td>
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<tr>
<td>Entrance Exam: GRE</td>
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<tr>
<td>Application Deadline: March 1 (Fall)</td>
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</tbody>
</table>

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 their 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.

Required Courses I (48-66 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NSC 501</td>
<td>Principles of Neuroscience I</td>
<td>4(4-0)</td>
</tr>
<tr>
<td>NSC 502</td>
<td>Principles of Neuroscience II</td>
<td>4(4-0)</td>
</tr>
<tr>
<td>NSC 690</td>
<td>Research Seminar Neuroscience</td>
<td>1-4(Spec)</td>
</tr>
<tr>
<td>NSC 789</td>
<td>Graduate Seminar in Neuroscience</td>
<td>1-12(Spec)</td>
</tr>
<tr>
<td>NSC 798</td>
<td>Thesis: Design 1-3(Spec)</td>
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<tr>
<td>NSC 799</td>
<td>Thesis: Implementation 1-3(Spec)</td>
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<tr>
<td>NSC 800</td>
<td>Neuroscience Research for Doctoral Candidacy</td>
<td>1-12(Spec)</td>
</tr>
<tr>
<td>NSC 898</td>
<td>Doctoral Dissertation: Design 1-12(Spec)</td>
<td></td>
</tr>
<tr>
<td>NSC 899</td>
<td>Doctoral Dissertation: Implementation 1-12(Spec)</td>
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</tr>
</tbody>
</table>

Note: A minimum of 4 hours of NSC 690, 6 hours of NSC 789, 6 hours from a combination of NSC 798 and NSC 799, 6 hours of NSC 800, and 18 credit hours from the combination of NSC 898 and NSC 899 is required. In addition to course work, a student must complete an oral examination over the thesis, major paper (NSC 800), and the dissertation.

Required Courses II (3 hours)

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 500</td>
<td>Biological Statistics 3(2-2)</td>
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<tr>
<td>PSY 511</td>
<td>Statistics in Psychology 3(3-1)</td>
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Required Courses III (3 hours)

Select one of the following:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIO 600</td>
<td>Biological Research Design and Analysis 3(2-2)</td>
<td></td>
</tr>
<tr>
<td>PSY 611</td>
<td>Research Design 3(3-0)</td>
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</tr>
</tbody>
</table>

Electives (18-36 hours)

To be chosen in consultation with an advisor.

Total: 90 semester hours

Course Descriptions: NSC

NSC 501 Principles of Neuroscience I 4(4-0)

First of two core courses for advanced (grad-prep) undergraduates and graduates providing comprehensive neuroscience fundamentals such as history, key cells and molecules, and sensation mechanisms. Prerequisites: A signed major in Neuroscience Grad-Prep (Opt. B); PSY 387 (3) or BIO 392 (4); or graduate standing in the Neuroscience Graduate Program.

NSC 502 Principles of Neuroscience II 4(4-0)

Second of two core courses for advanced (grad-prep) undergraduates and graduates providing comprehensive neuroscience fundamentals. Prerequisites: NSC 501.
Operate 600 Special Issues in Neuroscience 1-12(Spec)
Subjects of contemporary neuroscience not covered by regular curriculum. May be repeated to a maximum of twelve hours. Prerequisites: Permission of instructor.

Operate 690 Research Seminar Neuroscience 1-4(Spec)
Seminar emphasizing review of the primary literature in several areas of neuroscience. May be repeated for a maximum of four credits. Prerequisites: Graduate standing in the Neuroscience Program.

Operate 696 Directed Research 1-12(Spec)
For students who desire to investigate some research problem in neuroscience. Prerequisites: Graduate standing.

Operate 697 Independent Study 1-8(Spec)
For students who accept the responsibility of studying a specific area of neuroscience with minimal supervision. Prerequisites: Graduate standing.

Operate 789 Graduate Seminar in Neuroscience 1-12(Spec)
In-depth exploration of a specific area in neuroscience through the review of the primary literature. May be repeated up to a maximum of 12 hours. Prerequisites: Permission of instructor.

Operate 798 Thesis: Design 1-3(Spec)
Design of a Master's thesis. CR/NC only. Prerequisites: Graduate standing in the Neuroscience Program.

Operate 799 Thesis: Implementation 1-3(Spec)
Completion of a Master's thesis designed in NSC 798. CR/NC only. Prerequisites: NSC 798.

Operate 800 Neuroscience Research for Doctoral Candidacy 1-12(Spec)
Major research course in which students work in close collaboration with instructor in preparing significant research project in a specific area of neuroscience. Prerequisites: NSC 799 and permission of instructor.

Operate 898 Doctoral Dissertation: Design 1-12(Spec)
Design of a doctoral dissertation. CR/NC only. Prerequisites: NSC 800.

Operate 899 Doctoral Dissertation: Implementation 1-12(Spec)
Completion of the doctoral dissertation designed in NSC 898: data collection, analysis, and write-up. CR/NC only. Prerequisites: Completion of NSC 898.

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 window for the 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(3-0)
GEO 503 - Geographic Information Systems 3(2-2)
STA 591 - Data Mining Techniques I 3(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(3-0)
CPS 585 - Applied Data Engineering 3(3-0)
GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)
STA 580 - Applied Statistical Methods I 3(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
Master of Arts in Teaching Integrated Science (M.A.T.)

College of Science and Technology

Contact: John Scheide, Dept. of Biology
989-774-3291; schei1ji@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 a particular science area (biology, chemistry, earth science, physics) may find this degree useful for the eventual addition of a new endorsement. However, these teachers should also consider a masters program (MS, MA, or MAT) in their area of specialty (e.g., Biology, Chemistry, etc.). Completion of the MAT in the Integrated Science program by itself does not involve any new endorsement. Teachers will apply new content knowledge to their classrooms through the design of instructional materials and experiments that emphasize student learning through inquiry. They will also gain pedagogical skills required to teach inquiry-based science.

Students may choose to pursue either a Plan A thesis option (a 30 semester hour degree) or a Plan B non-thesis option (a 36 semester hour degree). Fifteen credits must be earned at the 600-level or above. The thesis or research project is completed under the direction of the major advisor and the student's advisory committee. Students interested in the thesis option should identify a faculty member who has appropriate scientific and academic qualifications and is willing to commit appropriate time to thesis supervision, and define a project of mutual interest. A thesis proposal must be prepared in collaboration with the faculty advisor and the committee before the research project is to begin. Approval from other committees and oversight bodies (e.g., IRB, Safety Officer) may be required before the thesis research can begin.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

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.) 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.

Select one of the following Plans:

Plan A (30 hours)
Thirty 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 619 - 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(6-6)
- SCI 798 - Thesis 1-6(6-6)

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 Nethercutt Woodland and then develop a guide to be used by those visiting the property.

Required Science Education Courses (9 hours)
- EDU 619 - 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.
Doctor of Philosophy (Ph.D.) in Earth and Ecosystem Science
College of Science and Technology

Jessica Lapp  
E&T Building 228, 989-774-4401

Minimum Totals for Graduation: 60 hours

The Doctor of Philosophy (Ph.D.) degree in Earth and Ecosystem Science (EES) at Central Michigan University is an interdisciplinary program that provides advanced scientific training in an investigatory field of study that employs a systems-level approach to evaluate the physical, chemical, and biological structure and function of various natural environments.

This research-intensive degree program trains students to understand, investigate and evaluate the multiple patterns and processes that regulate environmental variation across a range of temporal and spatial scales. EES students investigate the behavior of whole ecosystems in specific and unique geographic regions, with a particular focus on the interrelations between multiple factors that regulate variation in the environment. This subject is broad and inherently multidisciplinary, encompassing aspects of biology, chemistry, geology, geography, physics and mathematics. Research in EES explores patterns (biodiversity, reaction, physical architecture), processes (fate, transport, efficiency), regulation (complexity, stability, feedback) and management (sustainability, global change) of ecosystems and key ecosystem components.

The EES program promotes research on a range of ecosystem types including terrestrial, aquatic (freshwater and saltwater) and global ecosystems in natural, managed, or disturbed states.

The Earth and Ecosystem Science (EES) doctoral degree program at CMU provides students with an opportunity to develop the ability and skills necessary to conduct independent, primary research of professional quality; their research focuses on identification, description, and interpretation of factors that regulate variation in the environment. This subject is broad and inherently multidisciplinary, encompassing aspects of biology, chemistry, geology, geography, physics and mathematics. Research in EES explores patterns (biodiversity, reaction, physical architecture), processes (fate, transport, efficiency), regulation (complexity, stability, feedback) and management (sustainability, global change) of ecosystems and key ecosystem components.

The EES program promotes research on a range of ecosystem types including terrestrial, aquatic (freshwater and saltwater) and global ecosystems in natural, managed, or disturbed states.

The EES degree program offers a collegial forum for advanced students to explore hypothesis-driven, as well as discovery-driven, research topics in Earth and Ecosystem Science. Students develop advanced skills in areas including analytical approaches and methodologies, critical thinking, and the communication of research results. EES promotes academic excellence through the successful completion of graduate research that will inform professional and public shareholders so they can better understand and manage sustainable ecosystems.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

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<tr>
<th>ADMISSION REQUIREMENT SNAPSHOT</th>
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<td>GPA: 3.0</td>
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<td>Entrance Exam: GRE</td>
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Application Deadline: February 1 for all materials

See Admission Requirement Details Below

The deadline for receipt of application materials for admission into the EES program is February 1. Application materials must be submitted to the College of Graduate Studies and must include: official college transcripts, official GRE scores, a personal statement outlining interest in the EES program and identifying potential faculty mentors, a demonstrated potential for success in research as indicated by prior experience, and three letters of recommendation. Candidates are expected to hold a Bachelor of Science (B.S.) or Master of Science (M.S.) degree in chemistry, biology, geology, geography, mathematics or other relevant areas of science. International students must meet the requirements for regular admission to the College of Graduate Studies. Students admitted for a doctoral degree in EES must have a faculty mentor approved and financial support in the form of a teaching or 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 College of 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.

(Continued)
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: Admission 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. Prerequisites: 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: Admission 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: Admission 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

Jessica Lapp
E&T Building 228, 989-774-4401

Minimum Totals for Graduation: 60 hours

- The science of materials combines elements of chemistry, physics 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.

Application Deadline: Feb. 1 (for Summer II Admission)

Admission Requirements, Retention & Termination Standards

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 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 identify a 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 College of 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)**

**Materials Core**
- Select two of the following:
  - SAM 720 - Inorganic and Nanomaterials Laboratory 4(2-6)
  - SAM 721 - Polymeric and Biomaterials Laboratory 4(2-6)
  - SAM 723 - Engineering Materials Laboratory 4(2-6)

**Required Courses II (4 hours)**

- **Current Topics Seminar**
  - SAM 685 - Current Topics in the Science of Advanced Materials 1-5(Spec)
- **Seminar in the Science of Advanced Materials**
  - SAM 785 - Seminar in the Science of Advanced Materials 1(1-0)
  - 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 PhD 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 PhD program.

**SAM 721 Polymeric and Biomaterials Laboratory 4(2-6)**
- Experimental synthesis, characterization, and modeling techniques used for polyomers 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.

MST 588 Museum Internship 6(Spec)

Supervised work experience applying classroom concepts and skills in the operation and programming of a museum, historic site or other informal learning center. Prerequisites: Obtain permission of Director of the Museum Studies Program.

MST 610 International Cultural Laws and Ethics

Explore the laws that protect our cultural heritage using case studies that investigate current trends at the state, national, and international level. Prerequisites: ANT 645, HST 580, MST 550.

MST 620 Museum Management 3(3-0)

Discover the dynamic world of museum management where leadership and creativity in a fast-paced environment is the norm.

MST 740 Seminar in Emergency Preparedness 3(3-0)

Cultural institutions frequently face recovery from natural and civil disasters. Prepare a recovery plan under experienced leadership. Prerequisites: MST 550.

MST 750 Seminar in Advanced Exhibit Design and Construction 3(3-0)

Museums primarily communicate their message through exhibits. Learning the theory and method of exhibit design and fabrication.

MST 775 Seminar in Funding and Fundraising 3(3-0)

Achieving adequate financial support is an ongoing challenge facing museums. Explore the various methods that museums use to fund their educational programs.

MST 798 Creative Endeavors in Museum Studies 3(3-0)

Museum professionals use creative tools to educate and entertain. This supervised hands-on experience allows students to explore their own creativity in the museum context. Prerequisites: Approval of the Interdisciplinary Science Education Council chair.

SCI 730 Seminar 1(1-0)

A formal, public oral presentation of Plan A (thesis) research. Required of students receiving the MAT in Integrated Science on the Plan A option. CR/NC only. Prerequisites: Approval of the Interdisciplinary Science Education Council chair.

SCI 790 Research in Science Education 2-4(Spec)

Provides students with an experience in research techniques for science education. CR/NC only. Prerequisites: Admission to the MAT in Integrated Science and approval of the Interdisciplinary Science Education Council chair.

SCI 798 Thesis 1-6(Spec)

Thesis committee approved research towards a Plan A thesis. CR/NC only. Prerequisites: Approval of the Interdisciplinary Science Education Council chair.

SSC 597 Special Studies in Social Science 1-12(Spec)

Primarily for graduate students. Prerequisite: permission of instructor.

WST 590 Gender, Culture, and Society 3(3-0)

Analysis of gender roles in various cultures; theoretical approaches to explaining gender role variation. Identical to ANT 590 and SOC 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.
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. (Continued)
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.

A. If the candidate has been admitted to a master’s degree program, he/she may submit a copy of the Authorization of Graduate Degree Program, signed by the advisor, with the application as evidence that the student is pursuing a “planned course of study beyond the bachelor’s degree.”

B. A candidate who is not pursuing a graduate degree or who has initially been granted non-degree status in graduate school, or who is pursuing undergraduate study must obtain approval for a “planned course of study” beyond the bachelor’s degree from an advisor in the appropriate department by contacting the EHS Center for Student Services. The student is expected to have a signed program on file before registering for his or her first coursework at Central Michigan University.

2. Apply for a Professional Certificate at 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 sub-rule (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.
1. Preamble

The students, faculty, and staff of Central Michigan University constitute an academic community that is committed to the preservation, communication, and discovery of knowledge, and to the active pursuit of truth. Consistent with this purpose, the University recognizes its obligation to afford each student the opportunity to develop his or her educational potential while retaining free exercise of rights and freedoms as a citizen. Such opportunity should be limited only by the necessity of insuring equality of opportunity to all students, and by the corollary requirement of orderly operation of the educational processes. Each member of the Central Michigan University community assumes an obligation regarding self-conduct to act in a manner consistent with a respect for the rights of others and with the University's function as an educational institution. As guides for individual and group actions within this community, the University affirms the following general principles of conduct. These principles serve as the basis for regulations concerning student conduct.

1.1 The community requires a system of order supportive of the educational process that is the purpose of the University. Primary responsibility for preserving the system of order rests upon the individuals making up the community. Each individual must accept responsibility for 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, WMH, 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 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 of Enrollment and Student Services is the designated officer responsible to the president for conducting disciplinary review of a decision of the Appeals Board to suspend a student for more than one week or to dismiss a student. The Assistant 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 Assistant Vice President For Student Affairs or to the persons designated by the AVP For Student Affairs to receive such reports.

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, on or affecting University owned or controlled property, or when the student is in attendance at a University sponsored event, or when the interests of the University as a community, are clearly involved. 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 campus, 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. Copies of the Policy on Academic Integrity may be accessed at www.oit.cmich.edu

3.2.2 False Information. A student shall not furnish, or attempt to furnish, false or misleading information to University officials or to the 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. 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/Sexual 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, battery, or sexual assault.

Sexual assault includes, but is not limited to, inflicting sexual contact upon another person or sexually penetrating any person without that person's consent. Conduct will be considered without consent if no clear consent is given, or when the inflicted person is unconscious or otherwise without the physical or mental capacity to consent. Inflicting sexual contact on someone under the influence of alcohol or drugs may be considered "without consent."

3.2.8 Self-Injurious Behavior/Attempted Suicide. A student shall take no action, which threatens or endangers his or her own safety, health, or life, nor shall a student make any verbal threat of such action. This includes such behaviors as suicide attempts, cutting, refusing treatment for life threatening illnesses or conditions (e.g. eating disorders).

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 & 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. Abuse includes but is not limited to: unauthorized entry or transfer of a file, unauthorized downloading or uploading of copyrighted information, unauthorized use of another individual's identification and password; use of computing facilities to interfere with the work of a student, faculty members or university officials; or use of computing facilities to interfere with normal operation of the university. 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/Stalking. A student shall not bully, haze, harass or stalk any person or group of persons. Telephone harassment, texting, e-mail, computer or online social media harassment, stalking, racial and sexual harassment are included under this policy, as are all other forms of bullying and harassment not specifically mentioned here.
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, fireman 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 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.

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: Subjection to a period of critical examination and evaluation of behavior. In addition to any of the sanctions set forth above, the student or organization may be placed on probation for a stated period. Placement on probation may include additional restrictions or requirements, including but not limited to the following:

a) Withdrawal of the privilege of campus registration of a motor vehicle;

b) Withdrawal of the privilege of membership in a campus organization;

c) Withdrawal of the privilege of holding office in a campus organization;

d) Withdrawal of the privilege of representing the University in any inter-university event;

e) Requirement to complete a specified number of credit hours with a specific grade point average during the current or subsequent academic session;

f) Requirement to complete coursework related to the violation;

g) Withdrawal of the privilege of using computing resources;

h) Completion of work or other service to be provided to the University or other organization within a specified time. The person or body imposing this sanction may impose another allowed sanction as an alternative if the specified service is not completed within the time stipulated and may impose additional sanctions.

A condition of probation may be that automatic suspension or dismissal of a student or organization shall occur upon a determination (under the procedures set forth in Article 5 herein) that a violation of a condition of probation or any other violation has occurred.

4.1.9 Suspension/Dismissal from an Academic Program: Exclusion from an academic program as set forth for a definite or indefinite period of time.

4.1.10 Suspension: Exclusion from classes and other privileges or activities as set forth for a definite period of time. Suspension may include exclusion from the campus and property belonging to the University for a stated period of time and may require an independent evaluation supporting the student or organization’s return, with which CMU concurs.

4.1.11 Dismissal: Permanent termination of student status.
4.2 Additional Sanctions:
Sanctions in addition to those listed in Article 4.1 may be established by the University.

4.3 Temporary Suspension
The University reserves the right to suspend a student, summarily and without notice, if in the judgment of the President of the University or the President’s representative a student’s presence would constitute a continuing danger to the 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 and a hearing before a Hearing Officer will be held within three (3) business days. The hearing will be conducted according to procedures outlined in section 5.2.3 of this document.

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 Violence against persons that constitutes sexual assault.
4.4.6 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.
4.4.7 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.
4.4.8 Possession of a firearm or any other dangerous weapon as described in Section 3.2.14.
4.4.9 Participation in a riot or civil disorder as described in Section 3.2.20 or 3.2.22.
4.4.10 Urging other persons to commit unlawful acts during a riot or civil disorder, as described in 3.2.21.
4.4.11 Being present at a riot or civil disorder after an order has been given to disperse.
4.4.12 Violations of Sections 3.2.7 (Threat/Endangerment/Assault/Sexual Assault) or 3.2.9 (Property Damage) during a riot or civil disorder.
4.4.13 Violation of the terms of any injunction regulating conduct in Isabella County or the terms of the Mt. Pleasant Nuisance Ordinance during and as a part of a riot or civil disorder.

5. Student Hearing Procedures for Charged Violation of Student Conduct Regulations

5.1 Intake Conduct Proceedings Officer
5.1.1 A charge may be made to the Conduct Proceedings Officer by any member of the university community or may be brought by the Conduct Proceedings Officer on one’s own initiative stating that a student has violated the Specific Regulations Concerning Student Conduct (3.2). Students subject to the provisions of this Code are defined as all persons who have enrolled at the University, either full-time or part-time, pursuing undergraduate, graduate, or non-degree studies. Persons who have been enrolled at the University, and who have not withdrawn, 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.

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If notified by either United States mail or by University e-mail, 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 when the student responds to 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.

The student will have two (2) days from the date of receipt in which to respond to this notice. If the student has not responded to the notice by the end of this two-day period, the Conduct Proceedings Officer will set up a hearing, and cause to be delivered to the student a copy of this document.

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, 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 referral to a process provided by the Behavioral Evaluation Team. This option is available in situations where the alleged conduct of the student appears to be related to a mental disorder or emotional problem.

5.2 Hearings

There are two hearing forums: The University Hearing Officer and the University Hearing Body. The Conduct Proceedings Officer will assign a case to one of these forums, except that in cases where there is potential for a sanction of suspension or dismissal, the student may choose which hearing forum will hear the case. The student will have two (2) business days from the date of the meeting with the Conduct Proceedings Officer to make a final choice in writing to the Conduct Proceedings Officer. If no such timely choice is made, the Conduct Proceedings Officer will designate whether the case will be heard by a Hearing Officer or Hearing Body. The student will be notified of the time and date of the hearing.

5.2.1 University Hearing Officer

5.2.1.1 One or more University Hearing Officers will be appointed by the President or the President’s designee and must participate in the appropriate training sessions regarding the Code of Student Rights, Responsibilities and Disciplinary Proceedings.

5.2.1.2 The University Hearing Officer will be assigned by the President or the President’s designee 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 selected by the President or the President’s designee in consultation with Student Government Association and must participate in the appropriate training sessions regarding the Code of Student Rights, Responsibilities and Disciplinary Proceedings.

5.2.2.3 The University Hearing Body, based upon the information presented at the hearing, determines whether the student charged violated student conduct regulations, and sets the sanction, when applicable. Failure to complete the terms of the sanction may result in suspension from the University as determined by the Conduct Proceedings Officer. Certain violations have automatic sanctions imposed according to Section 4.4. In such cases, the University Hearing Body will decide if a violation has occurred and, if so, the terms of a mandatory sanction.

5.2.3 Hearing Procedures

5.2.3.1 In all disciplinary hearings, the burden of proof rests with the Conduct Proceedings Officer, who must prove by a preponderance of evidence that a violation has occurred.

5.2.3.2 The student charged may have an advisor of the student’s choice present at the hearing. If the student’s advisor is an attorney, the student must notify the Conduct Proceedings Officer of this at least three (3) business days in advance of the hearing. The advisor’s role is limited to providing advice to the student. The advisor is not permitted to ask or answer questions or make oral arguments. Any case presented must be made by the student.

5.2.3.3 A record of the hearing, made by an audio recording device, will be kept by the Conduct Proceedings Officer at least until the appeal time is exhausted. The Conduct Proceedings Officer, on behalf of the University, will maintain all copies of these recordings.

5.2.3.4 A University Hearing Officer presides at all hearings.

5.2.3.5 Procedures at hearings will be communicated to the student charged at least twenty-four (24) hours before the hearing.

5.2.3.6 The Hearing Officer or Hearing Body will issue a written decision within three (3) business days stating if a violation has been found, what facts support this finding, and the sanction to be imposed if a violation has been found.

5.2.3.7 A copy of a decision by the University Hearing Body or University Hearing Officer will be mailed to the student within two (2) business days from the date the decision is made. The Conduct Proceedings Officer will coordinate procedures for communicating the decision.

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 Assistant 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 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:

5.4.11.1 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.

5.4.11.2 Order that a new hearing be held.

5.4.11.3 Change the sanction.

5.4.11.4 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 of 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 of 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 of 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 of Enrollment and Student Services. The application for review must contain the following information:
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 mail, 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) days following the date the notice is posted at facilities of the United States Post Office. 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) days from the date of receipt in which to respond to this notice. If the student has not responded at the end of this two-day period, the Conduct Proceedings Officer will set up a hearing, and cause to be delivered to the student a copy of this document.

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 issue a sanction.

6.1.6.2 The student charged or the person or group who first brought the charge 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:

6.1.7.1 The student denies the charge and the Conduct Proceedings Officer determines the matter may be subject to discipline.

6.1.7.2 The student chooses not to discuss the matter at the discussion offered by the Conduct Proceedings Officer. The student will be notified of the date and time of the hearing.

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 upon 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 Procedures at hearings 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 stating if a violation has been found, what facts support this finding, and the sanction to be imposed if a violation has been found.
6.2.3.7 A copy of a decision by the Graduate Studies Hearing Officer or Graduate Studies Hearing Body will be mailed to the student within two (2) business days from the date the decision is made. The Conduct Proceedings Officer will coordinate procedures for communicating the decision.

6.3 Instructor’s Rights
Central Michigan University recognizes that instructors have rights that need to be protected as well as those of the person who is cited.
6.3.1 The instructor has the right to have a person of his or her choice accompany him or her throughout the disciplinary hearing.
6.3.2 The instructor has the right to remain present during the entire proceeding.
6.3.3 The instructor 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 instructor 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 instructor 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 Body 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 requests.
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 Conduct Proceedings Officer 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 Body 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 rehear 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:

6.4.11.1 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.

6.4.11.2 Order that a new hearing be held.

6.4.11.3 Change the sanction.

6.4.11.4 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 Vice President of Enrollment and Student Services. Any student responding to a charge under these procedures, or the Administration, may make a written application to the Vice President of Enrollment and Student Services to review a decision made by the Appeals Board. The application must be received in the Office of the Vice President of 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 of 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 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 Vice President of Enrollment and Student Services by the person making application for review. If the Vice President of Enrollment and Student Services elects to review a decision of the Graduate Studies Appeals Board, either in part or entirely, the Vice President of Enrollment and Student Services 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, Graduate Studies Appeals Board, 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.

Approved July 12, 2012
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