The effective date for new programs subject to Statewide Academic Program review is implemented in accordance with the Statewide Academic Program Review calendar.
TO: Faculty Senate

This report is prepared and distributed for the following purposes:

1. To report new academic programs, changes in academic programs, discontinuations of academic programs, new courses, permanent changes in courses, and deletions of courses.
2. To notify the initiating colleges, schools, and departments of approval by the University Committee on Curriculum of their requests for new academic programs, changes in academic programs, discontinuations of academic programs, new courses, permanent changes in courses, and deletions of courses. Any items not approved by the Faculty Senate will be reported to the appropriate college and department or school.
3. To provide information to members of the faculty in each department about academic programs and courses in all colleges, departments, and schools of the University.

Reports of the University Committee on Curriculum to the Faculty Senate are organized as follows:

PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES:
Organized by colleges in alphabetical order. For a given college, academic units are organized in alphabetical order. For a given academic unit, degrees, majors, and specializations are organized in alphabetical order.

PART II - NEW COURSES:¹
Organized by academic units in alphabetical order; All-University courses appear last. For a given academic unit, courses are organized according to the names associated with course subject codes, in alphabetical order. Courses with the same subject code are in numerical order.

PART III - COURSE CHANGES:¹
Organized by academic units in alphabetical order; All-University courses appear last. For a given academic unit, courses are organized according to the names associated with course subject codes, in alphabetical order. Courses with the same subject code are in numerical order.

Not all of the above categories, and not all of the colleges and academic units, will necessarily appear in any given Senate Report.

¹One or more of the abbreviations that follow may be included in a course entry:
P: = Prerequisite monitored in SIS
C: = Corequisite
R: = Restriction
RB: = Recommended background
SA: = Semester Alias
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

1. Establish an Agricultural Technology Certificate in Food Processing, Technology and Safety in The Institute of Agricultural Technology. The University Committee on Undergraduate Education (UCUE) approved this request at its January 24, 2019 meeting.

a. Background Information:

The Institute of Agricultural Technology (IAT) provides Michigan State University with a unique niche in its capacity to help educate Michigan citizens and to help diversify the Michigan economy.

Employment and career opportunities continue to expand for those who have training and educational preparation in Food Processing and Technology. In response to industry needs, Michigan State University is collaborating with community colleges to offer a combined program, which enables students to complete an MSU Institute of Agricultural Technology certificate in Food Processing, Technology and Safety and an Associate Degree at the community college concurrently, bringing together the world acclaimed expertise of Michigan State University’s College of Agriculture and Natural Resources and the “close to home” convenience of outstanding community colleges. Students may continue their course work to obtain an Associate in Applied Science Degree from the community college partners in addition to the certificate from Michigan State University. Should students wish to continue their education, the appropriate predesignated credits may be applied to a bachelor’s degree program at Michigan State University if students meet the established transfer guidelines.

b. Academic Programs Catalog Text:

The Food Processing, Technology and Safety program prepares graduates for a wide range of employment and career choices. Each student receives personal, one-on-one help in selecting her/his program of study (including workplace internship).

Requirements for Food Processing, Technology and Safety

Students must complete 60 credits from the following:

1. All of the following courses (27 credits):
   ABM 100 Decision-making in the Agri-Food System 3
   AT 193 Agricultural Technology Clerkship 2
   AT 293 Professional Internship in Agricultural Technology 3
   FSC 111 Foundational Concepts in Food Processing and Technology 3
   FSC 112 Seminar in Food Processing, Technology and Safety 1
   FSC 113 Basic Commodity Overview Food Processing and Technology 3
   FSC 114 Food Processing and Technology Facilities Management 3
   FSC 125 Food Processing and Technology Unit Operations 2
   FSC 240 Applied Microbiology in Food Processing and Technology 2
**FSC 241** Safety Principles and Regulations in Food Processing and Technology  
**FSC 242** Applied Chemistry in Food Processing and Technology

2. Two of the following courses (4 credits):
   - FSC 230 Fruit and Vegetable Processing
   - FSC 231 Cereals Processing
   - FSC 232 Dairy Foods Processing
   - FSC 233 Muscle Foods Processing

3. Complete a minimum of 3 elective credits in the College of Agriculture and Natural Resources as approved by the program coordinator in the Institute of Agricultural Technology.

4. Complete 26 credits of additional course work through the College of Agriculture and Natural Resources, a community college partner (Kellogg Community College, Lansing Community College, Muskegon Community College, Northwestern Michigan College,) or an approved transferring institution. All course work must be approved by the program coordinator in the Institute of Agricultural Technology.

**Effective Fall 2019.**

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2. Change the requirements for **Master of Science** degree in **Community Sustainability** in the Department of Community Sustainability. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

   a. Under the heading **Requirements for the Master of Science Degree in Community Sustainability** make the following changes:

      (1) Under the heading **Requirements for Plan A and Plan B** replace item 1. and 2. with the following:

         1. All of the following courses (10 credits):
            - CSUS 800 Foundations of Community Sustainability I
            - CSUS 801 Foundations of Community Sustainability II
            - CSUS 802 Introduction to Interdisciplinary Inquiry
            - CSUS 805 Proposal Development for Interdisciplinary Inquiry
         2. A minimum of 11 credits in course work in a focus area selected in consultation with the student's guidance committee. At least 6 credits of this focus area must be in Community Sustainability.

      (2) Under the heading **Additional Requirements for Plan B** replace the entire entry with the following:

         1. A minimum of 3 credits of a techniques or skill-building course relevant to the student's academic and career goals, to be selected in consultation with the student's guidance committee.
         2. An additional 3 credits in the identified focus area.
         3. A minimum of 3 credits in CSUS 898 Master's Professional Project that focuses on developing an independent professional or project experience appropriate to the student's academic and career goals.
         4. Completion and public defense of a paper based on the master's professional project.

   **Effective Fall 2019.**
3. Change the requirements for **Doctor of Philosophy** degree in **Community Sustainability** in the Department of Community Sustainability. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019.

   a. Under the heading **Requirements for the Doctor of Philosophy Degree in Community Sustainability** replace the entire entry with the following:

   A minimum of 60 credits is required for the degree. The student’s program of study must be developed in cooperation with and approved by the student’s guidance committee and must include the requirements specified below.

   1. All of the following courses (9 credits):
      
      | Course   | Title                                      | Credits |
      |----------|--------------------------------------------|---------|
      | CSUS 800| Foundations of Community Sustainability I  | 3       |
      | CSUS 801| Foundations of Community Sustainability II | 3       |
      | CSUS 802| Introduction to Interdisciplinary Inquiry  | 3       |

      If a student already has credit in any of these courses, these credits must be replaced by another 3 credits of research chosen in consultation with their advisor.

   2. Complete a minimum of 9 credits of course work in advanced research methods, to be selected in consultation with the student’s guidance committee, including at least 3 credits respectively in quantitative and qualitative methods, statistics, or other advanced research methods.

   3. Complete a minimum of 18 credits in course work grouped in two focus areas each of which must have a minimum of 9 credits. Of these, at least 3 credits in each focus area must be selected from Community Sustainability (CSUS) courses.

   4. Prepare a comprehensive examination program statement that presents the student’s learning and professional background and goals, and provides a rationale for the student’s declared focus areas integrating and summarizing the related research literature. This statement is prepared in consultation with the student’s guidance committee and is presented to the full faculty for review.

   5. Pass a comprehensive examination based on the student’s comprehensive examination program statement.

   6. Complete 24 credits of doctoral dissertation research and successfully defend the dissertation. Present the results of the research in a public seminar during the final oral examination.

   All students are encouraged to prepare at least one paper from the dissertation research suitable for submission to a professional and/or refereed academic journal.

   Effective Fall 2019.

4. Change the requirements for **Bachelor of Science** degree in **Sustainable Parks, Recreation and Tourism** in the Department of Community Sustainability.

   a. Under the heading **Requirements for the Bachelor of Science Degree in Sustainable Parks, Recreation and Tourism** make the following changes:

   (1) In item 1., replace paragraph two with the following:

   The University’s Tier II writing requirement for the Sustainable Parks, Recreation and Tourism major is met by completing Community Sustainability 301. That course is referenced in item 3. below.

   (2) In item 3., make the following changes:

   (a) Delete item b.

   (b) Reletter item c. to item b. and replace with the following:

   Six of the following courses (18 or 19 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSUS 273</td>
<td>Introduction to Travel and Tourism</td>
<td>3</td>
</tr>
</tbody>
</table>
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

CSUS 276  Sustaining Our National Parks and Recreation Lands  3
CSUS 430  Non-Profit Organizational Management for Community Sustainability  3
CSUS 433  Grant Writing and Fund Development (W)  3
CSUS 473  Social Entrepreneurship for Community Sustainability  3
CSUS 474  Advanced Topics in Tourism Management  3
CSUS 476  Natural Resource Recreation Management  4

(c) Reletter item d. to item c. and make the following change:

Delete the following course:
FW 419 Applications of Geographic Information Systems to Natural Resources  4

Add the following course:
FOR 419 Applications of Geographic Information Systems to Natural Resources Management  4

(d) Reletter item e. to item d. and make the following changes:

Delete the following course:
EEP 255 Ecological Economics  3

Add the following courses:
EEM 255 Ecological Economics  3
FI 320 Introduction to Finance  3
MGT 325 Management Skills and Processes  3

Effective Fall 2019.

5. Change the requirements for Master of Science degree in Sustainable Tourism and Protected Area Management in the Department of Community Sustainability. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

a. Under the heading Requirements for the Master of Science Degree in Sustainable Tourism and Protected Area Management make the following changes:

(1) Under the heading Requirements for Plan A and Plan B replace items 1. and 2. with the following:

1. All of the following courses (13 credits):
CSUS 800 Foundations of Community Sustainability I  3
CSUS 801 Foundations of Community Sustainability II  3
CSUS 802 Introduction to Interdisciplinary Inquiry  3
CSUS 805 Proposal Development for Interdisciplinary Inquiry  1
CSUS 814 Sustainable Tourism and Protected Area Management: Theories and Applications  3

2. A minimum of 8 credits in course work in a focus area selected in consultation with the student’s guidance committee. At least 3 credits of this focus area must be in Community Sustainability (CSUS) courses related to the student’s
professional goals in Sustainable Tourism and Protected Area Management.

(2) Under the heading Additional Requirements for Plan B replace items 2. and 3. with the following:

2. An additional 3 credits in the identified focus area.
3. A minimum of 3 credits of master’s professional project by enrollment in CSUS 898 that focuses on developing an independent professional or project experience appropriate to the student’s academic and career goals.
4. Successful completion and public defense of the master’s professional project proposal and paper based on the professional development project and its contribution to the student’s professional goals.

Effective Fall 2019.

6. Change the requirements for Doctor of Philosophy degree in Sustainable Tourism and Protected Area Management in the Department of Community Sustainability. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

a. Under the heading Requirements for the Doctor of Philosophy Degree in Sustainable Tourism and Protected Area Management replace the entire entry with the following:

The student’s program of study must be developed in cooperation with and approved by the student’s guidance committee and must include the requirements specified below:

1. All of the following courses (12 credits):
   CSUS 800 Foundations of Community Sustainability I 3
   CSUS 801 Foundations of Community Sustainability II 3
   CSUS 802 Introduction to Interdisciplinary Inquiry 3
   CSUS 814 Sustainable Tourism and Protected Area Management: Theories and Applications 3
   If a student already has credit in any of these courses, these credits must be replaced by another 3 credits of research chosen in consultation with their advisor.

2. Complete a minimum of 9 credits of course work in advanced research methods, to be selected in consultation with the student’s guidance committee, including at least 3 credits respectively in quantitative and qualitative methods, statistics, or other advanced research methods.

3. Complete a minimum of 15 credits in course work grouped in two focus areas each of which must have a minimum of 9 credits in one and 6 credits in the other. Of these, at least 3 credits in both focus areas must be selected from Community Sustainability (CSUS) courses related to the student’s professional goals in Sustainable Tourism and Protected Area Management.

4. Prepare a comprehensive examination program statement that presents the student’s learning and professional background and goals, and provides a rationale for the student’s declared focus areas integrating and summarizing the related research literature. This statement is prepared in consultation with the student's guidance committee and is presented to the full faculty for review.

5. Pass a comprehensive examination based on the student’s comprehensive examination program statement.

6. Complete 24 credits of doctoral dissertation research and successfully defend the dissertation. Present the results of the research in a public seminar during the final oral examination.

All students are encouraged to prepare at least one paper from the dissertation research suitable for submission to a professional and/or refereed academic journal.

Effective Fall 2019.
1. Establish a **Graduate Certificate in Indigenous Studies** in the College of Arts and Letters. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its January 14, 2019 meeting.

   a. **Background Information:**

   As a land-grant institution, which sits on traditional Anishinaabeg Three Fires territory, MSU has an opportunity to honor Indigenous history and ongoing presence by establishing a Graduate Certificate in Indigenous Studies. At this time, many graduate students are doing the cross-disciplinary work equivalent to a certificate, some units even using American Indian and Indigenous Studies (AIIS) as a University recruitment tool, yet there is no formal curriculum for students to study Indigenous issues at the graduate level. Across the United States and Canada, there are 34 programs, which have graduate-level degrees or certificates in American Indian and Indigenous Studies. The universities of Arizona, University of California-Davis, Manitoba (Canada), and Trent (Canada) offer PhDs, while California-Berkeley and Colorado offer well-known degrees in Comparative Ethnic Studies. The Graduate Certificate in Indigenous Studies will be a cost-effective and efficient way to leverage existing infrastructure and resources to offer graduate-level programming on par with our peer academic institutions. It allows American Indian and Indigenous Studies (AIIS) and the college to both leverage and extend the work already undertaken in the undergraduate curriculum and across the work of faculty affiliated with AIIS.

   The Graduate Certificate in Indigenous Studies fills a gap in graduate learning opportunities at Michigan State University. Currently, the college has a graduate affiliation with a core group of 10 to 15 graduate students, graduating approximately 4 students per year over the last 10 years. The certificate will draw upon the existing pool of graduate students active in the American Indian and Indigenous Studies program, and attract students from across the University who are interested in working on American Indian and Indigenous issues. It will promote cross-disciplinary work and cultivate a deeper knowledge of diversity, equity, and inclusion issues among the MSU graduate student community.

   In an increasingly competitive academic and non-academic job market, the transcriptable certificate will make graduates more attractive job candidates. There is increasing demand for similar certificate programs at peer institutions. Currently, Indigenous Studies focused certificates are operating at the universities of Illinois, Indiana, Kansas, Massachusetts, Cornell, and California-Riverside, among many others. The creation of this certificate will aid MSU in addressing recruitment and retention issues of Indigenous students.

   b. **Academic Programs Catalog Text:**

   The Graduate Certificate in Indigenous Studies, which is administered by the College of Arts and Letters, provides students with course work and a scholarly community that places intellectual value on Indigenous knowledges, methodologies, and collaborative research. The certificate underscores the importance of American Indian and Indigenous knowledge, while students critically engage the place of Indigenous peoples and knowledge historically and contemporarily. It draws on interdisciplinary research, teaching, and community engagement to examine these complex concepts and to respond to them thoughtfully. From a wide range of intellectual perspectives, students will work with, for, and on issues directly affecting Indigenous communities. While committed to comparative and global histories, knowledge, and sovereignties of Indigenous peoples, the certificate focuses primarily on Indigenous issues in the cross-border Great Lakes region, commonly known as Anishinaabewaki or Three Fires (Ojibwe, Odawa, and Potawatomi) territory.

   The certificate is available to students who are enrolled in a master’s or doctoral degree program at Michigan State University.

   The student’s program of study must be approved by the Graduate Director in Indigenous Studies in the College of Arts and Letters.
Requirements for the Graduate Certificate in Indigenous Studies

Students must complete a minimum of 9 credits from the following:

1. The following course (3 credits):
   - AIIS 801 Indigenous Theories and Methodologies (3)

2. At least two of the following courses (minimum of 6 credits):
   - AIIS 890 Independent Study in American Indian and Indigenous Studies (1 to 6 credits)
   - AIIS 891 Special Topics in American Indian and Indigenous Studies (3)
   - ANP 811 Knowledge, Memory, and Archives (3)
   - LWG 835B Federal Law and Indian Tribes (3)
   - LWG 835D American Indian Children and the Law (2)
   - LWG 835E Tribal Law (2)
   - LWG 835G Global Perspectives on Indigenous Peoples (2)

Other courses may also satisfy this requirement with approval of the Graduate Director of Indigenous Studies.

3. Complete the following capstone requirement in consultation with and approved by the Director of Indigenous Studies:
   a. Participation in eight American Indian and Indigenous Studies co-curricular individual activities and events, including, but not limited to, the Indigenous Studies Writing Group, Voices on Campus, Traditional Arts Gatherings, Sugar Bush, or other activities upon approval of the Graduate Director of Indigenous Studies.
   b. Presentation in at least one Indigenous Studies Graduate Colloquium, which is held annually every spring semester.

Upon completion of the capstone requirement a. and b., students will submit a portfolio that illustrates the learning outcomes and educational objectives of the Graduate Certificate in Indigenous Studies no later than the last day of instruction of the semester the student intends to graduate. The portfolio must include (1) a narrative statement; (2) documentation that demonstrates how the student has met requirements a. and b.; (3) samples of work such as papers or creative work; and (4) a curriculum vitae.

Effective Summer 2019.

ELI BROAD COLLEGE OF BUSINESS

1. Change the requirements of the Bachelor of Arts degree in Hospitality Business in The School of Hospitality Business. The University Committee on Undergraduate Education (UCUE) approved this request at its March 14, 2019 meeting.

   a. Under the heading Admission replace item 2. a. with the following:

      Computer Science and Engineering 102.

   b. Under the heading Requirements for the Bachelor of Arts Degree Hospitality Business make the following changes:

      (1) In item 2. a. (1) delete the following course:

         CSE 101 Computing Concepts and Competencies (3)

      Add the following course:

         CSE 102 Algorithmic Thinking and Programming (3)

      (2) Replace the note following item 2. a. with the following:
Students who place into Statistics 200 or 201 with a designated score on the Michigan State University mathematics services placement exam and successfully complete Statistics 200 or 201 will not be required to complete Mathematics 103.

Effective Fall 2019.

2. Change the administrative responsibility for the **Minor in Entrepreneurship and Innovation** in the Eli Broad College of Business to the Department of Management.

Effective Fall 2019.

3. Change the requirements for the **Minor in Entrepreneurship and Innovation** in the Department of Management.

   a. Under the heading **Requirements for the Minor in Entrepreneurship and Innovation** make the following changes:

   (1) In item 1. delete the following course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 190</td>
<td>The Art of Starting</td>
<td>3</td>
</tr>
</tbody>
</table>

   Add the following course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESHP 190</td>
<td>The Art of Starting</td>
<td>3</td>
</tr>
</tbody>
</table>

   (2) In item 2. delete the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 170</td>
<td>Business Model Development: The Hive Startup</td>
<td>3</td>
</tr>
<tr>
<td>BUS 230</td>
<td>The Entrepreneurial Mindset</td>
<td>3</td>
</tr>
<tr>
<td>MKT 380</td>
<td>Entrepreneurship: Planning, Modeling and Adaptive Execution</td>
<td>3</td>
</tr>
<tr>
<td>MKT 480</td>
<td>Entrepreneurship Capstone Experience</td>
<td>3</td>
</tr>
<tr>
<td>STA 303</td>
<td>Design Thinking</td>
<td>3</td>
</tr>
</tbody>
</table>

   Add the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 230</td>
<td>Survey of Accounting Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ESHP 170</td>
<td>Business Model Development</td>
<td>3</td>
</tr>
<tr>
<td>ESHP 230</td>
<td>The Entrepreneurial Mindset</td>
<td>3</td>
</tr>
<tr>
<td>ESHP 380</td>
<td>Entrepreneurship: Planning, Modeling and Adaptive Execution</td>
<td>3</td>
</tr>
<tr>
<td>ESHP 480</td>
<td>Entrepreneurship Capstone Experience</td>
<td>3</td>
</tr>
<tr>
<td>HB 358</td>
<td>Hospitality Business Ownership</td>
<td>3</td>
</tr>
<tr>
<td>MGT 325</td>
<td>Management Skills and Processes</td>
<td>3</td>
</tr>
<tr>
<td>PKG 485</td>
<td>Packaging Development</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Fall 2019.
COLLEGE OF EDUCATION

1. Establish a Master of Arts degree in Special Education Leadership: Multi-Tiered Systems of Support in the Department of Counseling, Educational Psychology, and Special Education. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its January 14, 2019 meeting.

   a. **Background Information:**

   The implementation of a program in Multi-Tiered System of Supports (MTSS) is a top priority of the Michigan Department of Education. Michigan State University would be the first University in Michigan to offer a Masters of Arts degree in Special Education Leadership: Multi-Tiered Systems of Support (MTSS) program. We feel that the faculty expertise at MSU makes MSU the perfect institution to offer a master’s degree program in MTSS. We also feel a master’s degree is appropriate as we are working to prepare leaders in the field of education in the area of MTSS. It is an integral part of Michigan’s strategic plan to make Michigan a Top 10 Education State in 10 years. Many other states have made MTSS a specific focus and have included MTSS in the improvement plans of districts and schools throughout the country. These districts need people to support implementation of the MTSS approach within their schools. According to the School Model Report (April 2014), "From 2004 to 2013, 521 elementary schools completed the three-year Multi-Tiered System of Supports (MTSS) training series with Michigan’s Integrated Behavior and Learning Support Initiative (MiBLSi)”. Source: (miblsi.org)

   The Master of Arts degree in Special Education Leadership: Multi-Tiered Systems of Support will meet the demand for students who want to become experts in the implementation of MTSS. By creating a value-added program, we can attract new students to MSU and give our current students another skill set that MSU does not currently offer. The function of MTSS is to improve student achievement and reduce problem behavior by accurately identifying students’ needs through comprehensive assessment and then providing evidenced-based interventions in academic and behavior supports. MTSS also provides academic and behavioral support to students who might be at risk of school failure, including facilitating the identification of and intervention for students who may have disabilities. The goal and purpose of MTSS is to create a positive school climate that supports the academic, behavioral, and social needs of all students through forms of disciplined inquiry and data-informed decision making.

   Because of the existing courses in the special education program, no new course work would need to be created or developed.

   b. **Academic Programs Catalog Text:**

   The Master of Arts degree in Special Education Leadership: Multi-Tiered Systems of Support (MTSS) program is designed to prepare students to become experts in the implementation of MTSS. It provides the opportunity to improve student achievement and reduce problem behavior by accurately identifying students’ needs through comprehensive assessment and then providing evidenced-based interventions in academic and behavior supports. MTSS also provides academic and behavioral support to students who might be at risk of school failure, including facilitating the identification of and intervention for students who may have disabilities. The goal and purpose of MTSS is to create a positive school climate that supports the academic, behavioral, and social needs of all students through forms of disciplined inquiry and data-informed decision making.

   Graduates of this program will obtain the skills necessary to make databased decisions for students and be able to implement MTSS to facilitate evidence-based behavior and academic learning in the classroom setting.

   In addition to meeting the requirements of the University and of the College of Education, students must meet the requirements specified below.
Admission

An applicant to the Master of Arts degree in Special Education Leadership: Multi-Tiered Systems of Support (MTSS) program must:

1. Submit both departmental and University application forms.
2. Submit three letters of recommendation from persons knowledgeable about the applicant’s academic potential to pursue graduate study and competence or potential to implement MTSS.
3. Submit a statement of professional goals that clearly describe the applicant’s reasons for pursuing the master’s degree and the goals that the emphasis area will help him/her attain.

Applications are reviewed by faculty who look for indicators of a high probability of success. The following factors are significant in determining admission to the Master of Arts degree in Special Education Leadership: Multi-Tiered Systems of Support (MTSS):

1. A grade-point average of 3.00 or higher in the last two years of all undergraduate and graduate courses.
2. Experience working with children and youth with disabilities in a school or other educational setting.
3. Professional goals that are consistent with the objectives of the degree program.
4. A test of English proficiency for students for whom English is not a first language.

Admission to the program is competitive and subject to space and availability. Not all students who meet the above requirements will be admitted. Students will be admitted only during summer and fall semesters. Applications must be submitted by February 1st.

Requirements for the Master of Arts Degree in Special Education Leadership: Multi-Tiered Systems of Support

The program is available only online and under Plan B (non-thesis). Students must complete a total of 30 credits distributed as follows:

1. All of the following courses (30 credits):
   - CEP 801A Collaboration and Consultation in Special Education: 3
   - CEP 802A Reflection and Inquiry in Teaching Special Education I: Mild Impairment: 3
   - CEP 803A Assessment of Students with Mild Disabilities: 3
   - CEP 804B Advanced Diagnosis and Remediation for Students with Literacy Disabilities: 3
   - CEP 809 Data-Driven Instruction within Multi-Tiered Systems of Support: 3
   - CEP 840 Policies, Practices, and Perspectives in Special Education: 3
   - CEP 841 Classroom and Behavior Management in the Inclusive Classroom: 3
   - CEP 842 Content-Area Instruction for Students with Mild Disabilities: 3
   - CEP 844 Applied Behavior Analysis for Teachers: 3
   - CEP 850 Technology and Literacy for Students with Mild Disabilities: 3

2. Completion of a final evaluation.

Effective Fall 2019.
2. Establish a **Graduate Certificate in Special Education Leadership: Multi-Tiered Systems of Support** in the Department of Counseling, Educational Psychology, and Special Education. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its January 14, 2019 meeting.

   a. **Background Information:**

   The implementation of a program in Multi-Tiered System of Supports (MTSS) is a top priority of the Michigan Department of Education. It is an integral part of Michigan’s strategic plan to make Michigan a Top 10 Education State in 10 years. Many other states have made MTSS a specific focus and have included MTSS in the improvement plans of districts and schools throughout the country. These districts need people to support implementation of the MTSS approach within their schools. According to the School Model Report (April 2014), “From 2004 to 2013, 521 elementary schools completed the three-year Multi-Tiered System of Supports (MTSS) training series with Michigan’s Integrated Behavior and Learning Support Initiative (MiBLSi)”. Source: (miblsi.org)

   The Graduate Certificate in Special Education Leadership: Multi-Tiered Systems of Support (MTSS) will attract students who do not want to complete a full master’s degree program; or who already hold a master’s degree and do not want to add another master’s degree. The purpose of MTSS is to improve student achievement and reduce problem behavior by accurately identifying students’ needs, preventing academic, behavior problems, and further identification of students needing special education services, and providing research-based instruction within a positive school climate. MTSS is being used more frequently throughout schools in order to meet the educational and behavioral needs of all students. Students in this program will obtain the skills necessary to make databased decisions for students and be able to implement MTSS to facilitate evidence-based behavior and academic learning in the classroom setting.

   Because of the existing courses in the special education program, no new course work would need to be created or developed.

   b. **Academic Programs Catalog Text:**

   The Graduate Certificate in Special Education Leadership: Multi-Tiered Systems of Support (MTSS) is designed to prepare students to become experts in the implementation of MTSS. It provides the opportunity to improve student achievement and reduce problem behavior by accurately identifying students’ needs through comprehensive assessment and then providing evidenced-based interventions in academic and behavior supports. MTSS also provides academic and behavioral support to students who might be at risk of school failure, including facilitating the identification of and intervention for students who may have disabilities. The goal and purpose of MTSS is to create a positive school climate that supports the academic, behavioral, and social needs of all students through forms of disciplined inquiry and data-informed decision making.

   Students will obtain the skills necessary to make databased decisions for students and be able to implement MTSS to facilitate evidence-based behavior and academic learning in the classroom setting.

   In addition to meeting the requirements of the University and of the College of Education, students must meet the requirements specified below. The certificate is available online only.

   **Admission**

   An applicant to the Graduate Certificate in Special Education Leadership: Multi-Tiered Systems of Support (MTSS) must:

   1. Submit both departmental and University application forms.
   2. Submit three letters of recommendation from persons knowledgeable about the applicant’s academic potential to pursue graduate study and competence or potential to implement MTSS.
3. Submit a statement of professional goals that clearly describe the applicant’s reasons for pursuing the master's degree and the goals that the emphasis area will help him/her attain.

4. Have access to high-speed internet and appropriate technologies.

Applications are reviewed by faculty who look for indicators of a high probability of success. The following factors are significant in determining admission to the Graduate Certificate in Special Education Leadership: Multi-Tiered Systems of Support (MTSS):

1. A grade-point average of 3.00 or higher in the last two years of all undergraduate and graduate courses.
2. Experience working with children and youth with disabilities in a school or other educational setting.
3. Professional goals that are consistent with the objectives of the program.
4. A test of English proficiency for students for whom English is not a first language.

Admission to the program is competitive and subject to space and availability. Not all students who meet the above requirements will be admitted.

Requirements for the Graduate Certificate in Special Education Leadership: Multi-Tiered Systems of Support

The certificate program is available online only. Students must complete 15 credits from the following:

1. All of the following courses (12 credits):
   - CEP 802A Reflection and Inquiry in Teaching Special Education I: Mild Impairment 3
   - CEP 803A Assessment of Students with Mild Disabilities 3
   - CEP 804B Advanced Diagnosis and Remediation for Students with Literacy Disabilities 3
   - CEP 809 Data-Driven Instruction within Multi-Tiered Systems of Support 3

2. One of the following courses (3 credits):
   - CEP 841 Classroom and Behavior Management in the Inclusive Classroom 3
   - CEP 844 Applied Behavior Analysis for Teachers 3

3. Completion of a final evaluation.

Effective Fall 2019.

COLLEGE OF ENGINEERING

1. Change the requirements for the Bachelor of Science degree in Applied Engineering Sciences in the College of Engineering.

   The concentrations in the Bachelor of Science degree in Applied Engineering Sciences are noted on the student’s academic record when the requirements for the degree have been completed.

   a. Under the heading Requirements for the Bachelor of Science Degree in Applied Engineering Sciences make the following changes:

      (1) In item 3. a. delete the following course:
           STT 315 Introduction to Probability and Statistics for Business 3

           Add the following course:
           STT 351 Probability and Statistics for Engineering 3

      (2) In item 3. c. Computer Science concentration replace items 2. and 3. with the following:
2. Two of the following courses (6 or 7 credits):
   - CSE 320 Computer Organization and Architecture 3
   - CSE 325 Computer Systems 3
   - CSE 331 Algorithms and Data Structures 3
   - CSE 335 Object-oriented Software Design 4
   - CSE 404 Introduction to Machine Learning 3
   - CSE 420 Computer Architecture 3
   - CSE 429 Interdisciplinary Topics in Cybersecurity 3
   - CSE 431 Algorithm Engineering 3
   - CSE 440 Introduction to Artificial Intelligence 3
   - CSE 471 Media Processing and Multimedia Computing 3
   - CSE 472 Computer Graphics 3
   - CSE 476 Mobile Application Development 3
   - CSE 477 Web Application Architecture and Development 3
   - CSE 480 Database Systems 3
   - CSE 482 Big Data Analysis 3

Effective Fall 2019.

2. Change the name of the **Master of Science** degree in **Electrical Engineering** to **Electrical and Computer Engineering** in the Department of Electrical and Computer Engineering. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

Students admitted to the major prior to Summer 2019 will be awarded a **Master of Science Degree in Electrical Engineering**.

Students admitted to the major Summer 2019 and forward will be awarded a **Master of Science Degree in Electrical and Computer Engineering**.

Effective Summer 2019.

3. Change the requirements for the **Master of Science degree in Electrical and Computer Engineering** in the Department of Electrical and Computer Engineering. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

   a. Under the heading **Requirements for the Master of Science Degree in Electrical and Computer Engineering** make the following change:

      (1) In item 1. delete the following course:

      - ECE 826 Linear Control Systems 3

      Add the following course:

      - ECE 851 Linear Systems and Control 3

Effective Summer 2019.

4. Change the name of the **Doctor of Philosophy** degree in **Electrical Engineering** to **Electrical and Computer Engineering** in the Department of Electrical and Computer Engineering. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

Students admitted to the major prior to Summer 2019 will be awarded a **Doctor of Philosophy Degree in Electrical Engineering**.

Students admitted to the major Summer 2019 and forward will be awarded a **Doctor of Philosophy Degree in Electrical and Computer Engineering**.

Effective Summer 2019.
COLLEGE OF MUSIC

1. Change the requirements for the Doctor of Philosophy degree in Music Education in the College of Music. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

   a. Under the heading Admission make the following changes:

      (1) Delete the following:

         3. Include in the letter required by the college a 500 to 700 word essay about the applicant's professional experience and future professional goals.

      (2) Replace paragraph two with the following:

         To be admitted to the program on regular status, an applicant must have at least one previous degree in music education, a master's degree in music education or related field, or a total of 30 credits of approved course work.

   Effective Spring 2020.

COLLEGE OF NATURAL SCIENCE

1. Change the requirements for the Graduate Specialization in Ecology, Evolutionary Biology and Behavior in the College of Natural Science. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

   a. Under the heading Requirements for the Graduate Specialization in Ecology, Evolutionary Biology and Behavior, add the following item 3. to the Required Core Courses:

      3. Both of the following quantitative methods courses (6 credits):
         IBIO 830 Statistical Methods in Ecology and Evolution I  3
         IBIO 831 Statistical Methods in Ecology and Evolution II  3

   Effective Fall 2019.

2. Change the requirements for the Dual Major in Ecology, Evolutionary Biology and Behavior in the College of Natural Science. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

   a. Under the heading Requirements for the Dual Major in Ecology, Evolutionary Biology and Behavior, replace item 3. with the following:

      3. Both of the following quantitative methods courses (6 credits):
         IBIO 830 Statistical Methods in Ecology and Evolution I  3
         IBIO 831 Statistical Methods in Ecology and Evolution II  3

   Effective Fall 2019.
3. Change the requirements for the Doctor of Philosophy degree in Neuroscience in the Program in Neuroscience. The University Committee on Graduate Studies (UCGS) approved this request at its March 11, 2019 meeting.

   a. Under the heading Admission make the following change:

      (1) In paragraph two, delete item 3.

   b. Under the heading Requirements for the Doctor of Philosophy Degree in Neuroscience make the following changes:

      (1) Replace items 1. and 2. with the following:

      1. Complete all of the following courses (20 credits):

         NEU 801 Molecular, Cellular and Developmental Neuroscience I 3
         NEU 802 Systems and Behavioral Neuroscience I 3
         NEU 803 Molecular, Cellular and Developmental Neuroscience II 3
         NEU 805 Systems and Behavioral Neuroscience II 3
         NEU 807 Strategies in Neuroscience Research 2
         NEU 815 Quantitative Skills in Neuroscience Research 3
         PHM 830 Experimental Design and Data Analysis 3

      2. Complete two elective courses relevant to neuroscience (4 to 6 credits).

Effective Fall 2019.

**COLLEGE OF OSTEOPATHIC MEDICINE**

1. Establish a Master of Science degree in Global Health in the College of Osteopathic Medicine. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its January 14, 2019 meeting.

   a. **Background Information:**

      The proposal for this degree program is driven by four demands: (1) a nationally and internationally recognized interest in academic programs in global health; (2) increasing interest in the part of medical and other health professions in global health course offerings; (3) a demand from partnering international universities in the desire to send students into a global health program delivered by Michigan State University; and (4) an interest on the part of the faculty across the university in developing a multi-disciplinary program around global health.

      Several recent publications have highlighted the growing interest in global health programs. For example, Withers et al. conducted an online survey of twelve higher educational institutions in the Pacific Rim. Enrollment in global health programs increased over three-fold between 2005-2011, the survey period. A survey was conducted during three separate meetings of the International Federation of Medical Student Associations (IFMSA) Over 91% of students surveyed responded “yes” to the statement “It is important for students to learn about global health in general” with 71% indicating it should be compulsory for all medical students. Additionally, Drain et al reported in Academic Medicine that the percentage of medical school graduates participating in an elective international health experience during medical school increased from 5% in 1975 to 25% in 2004. The authors suggested strategies to meet the global health interests of students, such as offering courses in global health and offering combined degree programs in global health.

      The MSU student population internationally and nationally has mirrored the increased interest by students. Because of demand for international electives, the Institute for
Global Health now boasts 10 international electives. Professional and graduate students from the Colleges of Osteopathic Medicine, Human Medicine, Nursing, and Veterinary Medicine participate in these electives, along with select undergraduate students. The Institute for Global Health also offers short-term training opportunities at MSU for health professions students and professionals from countries such as China, Japan, Korea, Mexico, and Peru. Collaborating universities have expressed significant interest in sending students to a MSU master’s program in global health. Several of our global partnering universities have expressed interest in co-sponsoring a program in the future.

The proposed program is unique as it is a distributive model in both instruction and finances. The core faculty are from four different colleges including the College of Osteopathic Medicine, the College of Veterinary Medicine, College of Nursing, and the College of Arts and Letters. The College of Human Medicine offers a Master of Public Health (MPH) program that is in the process of going through accreditation by the Council on Education for Public Health, but does not currently include a concentration in global health. The MPH also does not include competencies of the Consortium of Universities of Global Health (CUGH). The leadership of the MPH currently serves on the Global Health Committee.

A competitive market analysis performed by an outside consultant, BISK, identified a strong market for global health programs with a steady 10-year growth and low saturation. They also identified minimal online competition. Of 72 competitor programs, only 15 were online as of 2016. Within the region, there is a low presence of global health master degree programs. BISK identified 7 schools with a MPH with a global focus and none were online. Northwestern University is the only regional program with an online Master of Science Degree in Global Health. BISK recommended that MSU offer a global health degree online based on a relatively limited competitive market with high demand. BISK further stated “leveraging MSU’s strong regional presence and related interdisciplinary strengths will add to the potential success of this program”.

The Master of Science degree in Global Health is a competency-based program and incorporates many of the competencies recommended by the Consortium of Universities for Global Health (CUGH). CUGH published these competencies in a 2015 issue of Annals of Global Health. In collaboration with the International Studies and Programs, the Institute for Global Health purchased an institutional membership to CUGH to enable all faculty, staff and students to avail themselves of the resources of this professional society devoted to educational programs in global health. The program faculty, staff and students will have access to best practices in global health education and research offerings through journals, networking and conferences. The competencies are mapped within the courses of the program to ensure that all students completing the program will have exposure to all of the recommended competencies.

In addition to the CUGH competencies, the program will seek certification by Quality Matters for an online program. Quality Matters is an international organization recognized as a leader in quality assurance for online education. MSU is a member organization and has trained reviewers on campus who can certify online programs. We will seek certification within one year of matriculating students. All faculty participating in the program will be offered certification as online instructors through Quality Matters.

The College of Osteopathic Medicine has been home to the Institute for Global Health (IGH) for the past 30 years. The Institute was developed in 1987, when Dr. Roy Gerard of the Department of Family Practice received $4.2 million from the W.K. Kellogg Foundation to implement the Kellogg International Fellowship Program in Health. In the past 31 years, IGH has continued to flourish as MSU’s focal point of international health by expanding training, education, scholarship and research programs, as well as collaborative partnerships around the world. The mission of the Institute for Global Health is to provide global health education, research and capacity building for our partners that will position Michigan State University as a leader in addressing and solving global health challenges. IGH works with health-related colleges, as well as with agricultural, social and environmental scientists and nutritionists to foster and coordinate research, education, and development at a global level. IGH collaborates with Michigan-based hospitals affiliated with MSU’s College of Osteopathic Medicine to raise awareness of global health issues and help improve clinical services and health outcomes for underserved regions of the world.
b. **Academic Programs Catalog Text:**

The Master of Science degree in Global Health is an interdisciplinary degree administered by the College of Osteopathic Medicine in partnership with faculty from the Colleges of Arts and Letters, Communication Arts and Sciences, Nursing, Social Science, and Veterinary Medicine. The program stresses the interconnectedness of the animal, environment and human health and is applicable to a broad range of health professionals such as medical, nursing, or veterinary medicine as well as individuals interested in a holistic view of global health. The program prepares individuals to both manage and lead as global health professionals. Individualized programs of study can be tailored to accommodate individuals with a broad range of academic and professional experience and interests. The program is available online only.

In addition to meeting the requirements of the University and the College of Osteopathic Medicine, students must meet the requirements below.

**Admission**

To be considered for admission to the Master of Science degree in Global Health, an applicant must submit the following:

1. A transcript showing a completed undergraduate degree.
2. A personal statement describing interest and experience in global health, including career goals.
3. A resume or curriculum vitae.
4. Test scores from a standardized graduate or professional school test such as the GRE, GMAT, MCAT, DAT, LSAT. This requirement may be waived if applicant has a previously conferred graduate or professional degree.
5. A test of English language proficiency for students for whom English is not a first language.

**Requirements for the Master of Science Degree in Global Health**

**CREDITS**

The Master of Science degree in Global Health is available online only and only under Plan B (non-thesis). Students must complete 42 credits as specified below:

1. All of the following courses (27 credits):
   - **OST 821** One Health – Transdisciplinary Collaborations to Global Health: 3
   - **OST 822** Introduction to Global Health Practice: 3
   - **OST 823** Global Burden of Disease: 3
   - **OST 824** Emerging Topics in Global Health: 3
   - **OST 825** Ethical Issues in Global Health: 3
   - **OST 827** Global Health Management: 3
   - **OST 828** Global Health Capstone: 3
   - **OST 829** Global Health Community Assessment: 3
   - **OST 831** Evidence-Based Practice in Global Health: 3

2. Complete a minimum of 2 to 8 credits from the following courses. The elective chosen must be completed concurrently with **OST 829 Global Health Community Assessment**.
   - **OST 686** Global Health: Mexico – Community Medicine and Mayan Culture in the Yucatan: 3
   - **OST 687** Global Health: Peruvian Medical Service: 3
   - **OST 688** Global Health: Cuban Healthcare Delivery System: 3
   - **OST 689** Global Health: Haiti – Introduction to Global Health and Culture: 3
   - **OST 690** Global Health: Dominican Republic – Healthcare Delivery System and Culture: 3
   - **OST 691** Global Health: Guatemalan – Tropical Medicine and Infectious Disease: 1
   - **OST 692** Global Health: Turkish Healthcare Delivery System and Culture: 3
   - **OST 693** Global Health: Korean Healthcare Delivery System: 3
   - **OST 694** Global Health: One Health in Nepal: 3
   - **OST 830** Independent Study in Global Health: 1 to 3
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

3. Complete 9 to 15 credits selected from the following courses:
   - ANP 834 Medical Anthropology 3
   - ANP 835 Topics in Medical Anthropology 3
   - CAS 826 Health Communication for Diverse Populations 3
   - OST 830 Independent Study in Global Health 1 to 3
   - PSY 880 Foundations of Evaluation Practice 3
   - PSY 881 Evaluation Design 3

4. Successfully complete a capstone professional paper.

Effective Fall 2019.

2. Establish a **Graduate Certificate** in **Global Health** in the College of Osteopathic Medicine. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its January 14, 2019 meeting.

   a. **Background Information:**

   The proposal for this certificate is driven by four demands: (1) a nationally and internationally recognized interest in academic programs in global health; (2) increasing interest in the part of medical and other health professions in global health course offerings; (3) a demand from partnering international universities in the desire to send students into a global health program delivered by Michigan State University; and (4) an interest on the part of the faculty across the university in developing a multi-disciplinary program around global health.

   Several recent publications have highlighted the growing interest in global health programs. For example, Withers et al. conducted an online survey of twelve higher educational institutions in the Pacific Rim. Enrollment in global health programs increased over three-fold between 2005-2011, the survey period. A survey was conducted during three separate meetings of the International Federation of Medical Student Associations (IFMSA) Over 91% of students surveyed responded “yes” to the statement “It is important for students to learn about global health in general” with 71% indicating it should be compulsory for all medical students. Additionally, Drain et al reported in Academic Medicine that the percentage of medical school graduates participating in an elective international health experience during medical school increased from 5% in 1975 to 25% in 2004. The authors suggested strategies to meet the global health interests of students, such as offering courses in global health and offering combined degree programs in global health.

   The MSU student population internationally and nationally has mirrored the increased interest by students. Because of demand for international electives, the Institute for Global Health now boasts 10 international electives. Professional and graduate students from the Colleges of Osteopathic Medicine, Human Medicine, Nursing, and Veterinary Medicine participate in these electives, along with select undergraduate students. The Institute for Global Health also offers short-term training opportunities at MSU for health professions students and professionals from countries such as China, Japan, Korea, Mexico, and Peru. Collaborating universities have expressed significant interest in sending students to a MSU master’s program in global health. Several of our global partnering universities have expressed interest in co-sponsoring a program in the future.

   The proposed program is unique as it is a distributive model in both instruction and finances. The core faculty are from four different colleges including the College of Arts and Letters, the College of Osteopathic Medicine, the College of Veterinary Medicine and the College of Nursing. The College of Human Medicine offers a Master of Public Health (MPH) program that is in the process of going through accreditation by the Council on Education for Public Health, but does not currently include a concentration in global health. The MPH also does not include competencies of the Consortium of Universities of Global Health (CUGH). The leadership of the MPH currently serves on the Global Health Committee.

   The Certificate in Global Health is a competency-based program and incorporates many of the competencies recommended by the Consortium of Universities for Global Health.
CUGH. CUGH published these competencies in a 2015 issue of Annals of Global Health. In collaboration with the International Studies and Programs, the Institute for Global Health purchased an institutional membership to CUGH to enable all faculty, staff and students to avail themselves of the resources of this professional society devoted to educational programs in global health. The program faculty, staff and students will have access to best practices in global health education and research offerings through journals, networking and conferences. The competencies are mapped within the courses of the program to ensure that all students completing the program will have exposure to all of the recommended competencies.

In addition to the CUGH competencies, the program will seek certification by Quality Matters for an online program. Quality Matters in an international organization recognized as a leader in quality assurance for online education. MSU is a member organization and has trained reviewers on campus who can certify online programs. We will seek certification within one year of matriculating students. All faculty participating in the program will be offered certification as online instructors through Quality Matters. The Certificate in Global Health will enable students to decide whether they would like to pursue a Master of Science in Global Health degree, which is concurrently being proposed. The certificate is a great option for students who are unable to complete the Master of Science degree, due to professional or personal obligations or for financial reasons.

b. Academic Programs Catalog Text:

The Graduate Certificate in Global Health is an interdisciplinary certificate administered by the College of Osteopathic Medicine in partnership with faculty from the Colleges of Arts and Letters, Nursing, and Veterinary Medicine. The certificate stresses the interconnectedness of the animal, environment and human health and is applicable to a broad range of health professionals such as medical, nursing, or veterinary medicine as well as individuals interested in a holistic view of global health. The certificate prepares individuals to both manage and lead as global health professionals. Individualized programs of study can be tailored to accommodate individuals with a broad range of academic and professional experience and interests. The certificate is available online only.

Admission

To be considered for admission to the Graduate Certificate in Global Health, an applicant must submit the following:

1. A transcript showing a completed undergraduate degree.
2. A personal statement describing interest and experience in global health, including career goals.
3. A resume or curriculum vitae.
4. Test scores from a standardized graduate or professional school test such as the GRE, GMAT, MCAT, DAT, LSAT. This requirement may be waived if applicant has a previously conferred graduate or professional degree.
5. A test of English language proficiency for students for whom English is not a first language.

Requirements for the Graduate Certificate in Global Health

The certificate program is available online only. Students must complete 9 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OST 821</td>
<td>One Health – Transdisciplinary Collaborations to Global Health</td>
<td>3</td>
</tr>
<tr>
<td>OST 822</td>
<td>Introduction to Global Health Practice</td>
<td>3</td>
</tr>
<tr>
<td>OST 823</td>
<td>Global Burden of Disease</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Fall 2019.
COLLEGE OF SOCIAL SCIENCE

1. Change the requirements in the **Minor in Law, Justice and Public Policy** in the School of Criminal Justice.
   a. Under the heading **Requirements for the Minor in Law, Justice and Public Policy** make the following changes:
      
      (1) In item 2., delete the following courses:
          
          - HST 318B United States Constitutional History from 1877 3
          - SOC 131 Social Problems 3
          
          Add the following courses:
          
          - HST 225 Law, History and Society in the United States 3
          - SOC 214 Social Inequality 3
          
      Effective Fall 2019.

2. Change the requirements for the **Bachelor of Arts degree in Economics**.
   a. Under the heading **Requirements for the Bachelor of Arts Degree in Economics** make the following changes:
      
      (1) In item 3. f. delete the following course:
          
          - CSE 101 Computing Concepts and Competencies 3
          
          Add the following course:
          
          - CSE 102 Algorithmic Thinking and Programming 3
          
      Effective Fall 2019.

3. Change the requirements for the **Bachelor of Arts degree in Sociology**. The University Committee on Undergraduate Education (UCUE) approved this request at its March 14, 2019 meeting.
   a. Under the heading **Requirements for the Bachelor of Arts Degree in Sociology** make the following changes:
      
      (1) Replace item 4. with the following:
          
          Complete a experiential learning experience through one of the following options, approved by the student's academic adviser:
          
          - SOC 480 Advanced Research Methods in Sociology 3
          - SOC 497 Individual Research 3
          - SOC 498 Sociology Internship 3
          
          Completion of a 3-credit minimum Sociology-related study away or study abroad program with a grade of 2.0 or pass in at least one of the program’s courses.
          
      Effective Fall 2019.
PART II - NEW COURSES

COLLEGE OF ARTS AND LETTERS

AIIS 801  Indigenous Theories and Methodologies
Spring of every year. 3(3-0)
Effective Spring 2019

AIIS 890  Independent Study in American Indian and Indigenous Studies
On Demand. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department.
Independent study in American Indian and Indigenous Studies.
Effective Spring 2019

AIIS 891  Special Topics in American Indian and Indigenous Studies
On Demand. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
Special topics in American Indian and Indigenous Studies
Effective Spring 2019

DEPARTMENT OF FINANCE

FI 872  Financial Data Analytics I
Fall of every year. 1 to 3 credits. R: Open to MBA students or approval of department.
Introduction to the analysis of real-world financial data in a variety of settings. Applying textual analysis to large documents, identifying “sentiment” in Google search data, and back-testing trading strategies. Developing the programming skills necessary to both collect and prepare data for analysis. Identifying, downloading, cleaning, and shaping data.
Effective Spring 2020

FI 873  Financial Data Analytics II
Fall of every year. 1 to 3 credits. P: FI 872 R: Open to MBA students or approval of department.
Advanced application of data analysis to finance. Automating data acquisition, to apply textual analysis to large documents and transcripts. Analyzing weather data, geographic data, corporate patent data, and posts on social media. Examining how the information in these databases is related to financial outcomes.
Effective Spring 2020

DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION

FSC 111  Foundational Concepts in Food Processing and Technology
Fall of every year. 3(3-0) R: Open to students in the Institute of Agricultural Technology.
Principles of food chemistry, microbiology, and physical science.
Effective Fall 2019

FSC 112  Seminar in Food Processing, Technology and Safety
Fall of every year. 1(1-0) R: Open to students in the Institute of Agricultural Technology.
Communication, organization, and time management skills for the food processing industry.
Effective Fall 2019

FSC 113  Basic Commodity Overview of Food Processing and Technology
Fall of every year. 3(3-0) R: Open to students in the Institute of Agricultural Technology.
Principles of food processing continuum. Production, through processing, to distribution.
Effective Fall 2019
FSC 114  Food Processing and Technology Facilities Management  
Spring of every year. 3(2-2) P: FSC 125 or concurrently R: Open to students in the Institute of Agricultural Technology.  
Food facility design and layout. Cleaning and sanitation systems, standards, and regulations. Total quality management principles.  
Effective Fall 2019

FSC 125  Food Processing and Technology Unit Operations  
Spring of every year. 2(1-2) P: FSC 111 R: Open to students in the Institute of Agricultural Technology.  
Operations to prepare, process, and preserve a variety of food products and their effects of food processing on quality and shelf life.  
Effective Fall 2019

FSC 230  Fruit and Vegetable Processing  
Fall of every year. 2(1-2) P: FSC 125 and (FSC 242 or concurrently) R: Open to students in the Institute of Agricultural Technology.  
Concepts and operations of the handling, preservation, and processing of fruit and vegetable crops  
Effective Fall 2019

FSC 231  Cereals Processing  
Spring of every year. 2(1-2) P: FSC 125 and (FSC 242 or concurrently) R: Open to students in the Institute of Agricultural Technology.  
Classification and composition of major cereal crops. Milling processes and cereal product manufacturing.  
Effective Fall 2019

FSC 232  Dairy Foods Processing  
Fall of every year. 2(1-2) P: FSC 125 and (FSC 242 or concurrently) R: Open to students in the Institute of Agricultural Technology.  
Handling and processing of milk and milk products.  
Effective Fall 2019

FSC 233  Muscle Foods Processing  
Spring of every year. 2(1-2) P: FSC 125 and (FSC 242 or concurrently) R: Open to students in the Institute of Agricultural Technology.  
Manufacturing practices and principles of fresh, frozen, and cured meats.  
Effective Fall 2019

FSC 240  Applied Microbiology in Food Processing and Technology  
Spring of every year. 2(2-0) P: FSC 111 RB: A previous course in biological science. R: Open to students in the Institute of Agricultural Technology.  
Microorganisms in food processing with emphasis on ecological, physiological, and public health aspects. Principles and practices to prevent food spoilage and food-borne outbreaks.  
Effective Fall 2019

FSC 241  Safety Principles and Regulations in Food Processing and Technology  
Fall of every year. 3(3-0) P: FSC 240 R: Open to students in the Institute of Agricultural Technology.  
Hazard Analysis Critical Control Points (HACCP), risk-based preventive controls, process validation, and statistical applications in food safety.  
Effective Fall 2019

FSC 242  Applied Chemistry in Food Processing and Technology  
Fall of every year. 2(2-0) P: FSC 111 RB: A previous course in general chemistry. R: Open to students in the Institute of Agricultural Technology.  
Chemical changes in foods as a result of formulation, processing, and storage.  
Effective Fall 2019
DEPARTMENT OF HISTORY

HST 355  Spain and the Muslim World
Fall of odd years. 3(3-0)
Effective Fall 2019

JAMES MADISON COLLEGE

MC 410  Research in Public Affairs
Fall of every year. Spring of every year. Summer of every year. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. RB: Complete Methods requirement for major. R: Open to undergraduate students in the James Madison College. Approval of college.
Faculty supervised undergraduate research in public and international affairs.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
Effective Fall 2019

PROGRAM IN NEUROSCIENCE

NEU 802  Systems and Behavioral Neuroscience I
Fall of every year. 3(3-0) RB: B.S., B.A. or M.S. in the biological or psychological sciences. R: Open to graduate students in the Program in Neuroscience. Approval of department.
Anatomy and physiology of multicellular neural systems controlling learning and memory, motivated behaviors, pain, biological rhythms and psychopathologies.
Effective Fall 2019

NEU 803  Molecular, Cellular and Developmental Neuroscience II
Spring of every year. 3(3-0) Interdepartmental with Physiology. RB: B.S., B.A. or M.S. degree in the biological or psychological sciences. R: Open to graduate students in the Program in Neuroscience. Approval of department.
Electrical and intra- and extracellular signaling mechanisms of neurons and glia in health and disease in the developing and mature nervous system.
Effective Fall 2019

COLLEGE OF OSTEOPATHIC MEDICINE

OST 598  Evidence-Based Health Science
Summer of every year. 1(1-0) R: Open to graduate-professional students in the College of Osteopathic Medicine.
Evidence-based approach to osteopathic basic science and clinical education and application to health science, critical review of literature, and research design.
Request the use of the Pass-No Grade (P-N) system.
Effective Summer 2019
OST 821  One Health—Transdisciplinary Collaborations to Global Health  
Fall of every year. Spring of every year. 3 credits. R: Open to master's students in the College of Osteopathic Medicine or approval of college.  
Transdisciplinary collaboration amongst different animal health, human health, and non-health specialists to solve problems at the interface of people, animals, and their environment.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Fall 2019

OST 822  Introduction to Global Health Practice  
Fall of every year. Spring of every year. 3 credits. R: Open to master's students in the College of Osteopathic Medicine or approval of college.  
Differences in national models of healthcare delivery, issues of social justice and human rights principles, and strategies to engage marginalized and vulnerable populations.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Fall 2019

OST 823  Global Burden of Disease  
Fall of every year. Spring of every year. 3 credits. R: Open to master's students in the College of Osteopathic Medicine or approval of college.  
Major causes of, types of, and efforts to reduce morbidity and mortality around the world.  
Techniques for monitoring and validating the health status of populations.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Fall 2019

OST 824  Emerging Topics in Global Health  
Fall of every year. Spring of every year. 3 credits. R: Open to master's students in the College of Osteopathic Medicine or approval of college.  
Emerging topics in global health and connections to current issues.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Fall 2019

OST 825  Ethical Issues in Global Health  
Spring of every year. 3 credits. R: Open to master's students in the College of Osteopathic Medicine or approval of college.  
International standards for protection of human subjects. Social justice and human rights principles within the global context.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Spring 2020

OST 827  Global Health Management  
Spring of every year. 3 credits. R: Open to master's students in the College of Osteopathic Medicine or approval of college.  
Leadership and management within the context of global healthcare, including interprofessional and intercultural values and communication.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Spring 2020
OST 828  Global Health Capstone  
Fall of every year. 3 credits. R: Open to master's students in the College of Osteopathic Medicine or approval of college.  
 Integration of knowledge, skills and competencies acquired in global health.  
 Request the use of ET-Extension to postpone grading.  
 The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
 Effective Fall 2020

OST 829  Global Health Community Assessment  
Fall of every year. Spring of every year. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to graduate students in the College of Osteopathic Medicine or approval of college.  
 Assessment of community health scenarios. Techniques for collaboration and co-creation with community partners.  
 Request the use of ET-Extension to postpone grading.  
 The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
 Effective Fall 2019

OST 830  Independent Study in Global Health  
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to master's students in the College of Osteopathic Medicine or approval of college.  
 Independent study in areas relevant to global health.  
 Request the use of ET-Extension to postpone grading.  
 The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
 Effective Fall 2019

OST 831  Evidence-Based Practice in Global Health  
Spring of every year. 3 credits. R: Open to master's students in the College of Osteopathic Medicine or approval of college.  
 Critical appraisal of scientific studies of global health interventions.  
 Request the use of ET-Extension to postpone grading.  
 The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
 Effective Spring 2020

DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

PHM 809  Drug Discover and Medicinal Chemistry  
Spring of even years. 2(2-0) Interdepartmental with Chemistry. RB: BS in Biomedical science discipline (including, but not limited to chemistry, biochemistry, pharmacology, chemical engineering, molecular biology, biology, pharmacy, human biology, physiology.) R: Open to doctoral students in the Department of Chemistry or in the Department of Pharmacology and Toxicology or approval of department.  
 Fundamentals of pharmaceutical drug discovery including basic chemistry, drug-design principles, high throughput screening, computational modeling, and drug metabolic pathways.  
 Effective Spring 2020
PART III – COURSE CHANGES

DEPARTMENT OF AGRICULTURAL, FOOD, AND RESOURCE ECONOMICS

AFRE 923  Advanced Environmental and Resource Economics
Fall of every year. 3(3-0) Interdepartmental with Economics and Forestry. RB: (AFRE 829 or concurrently) and EC 812A
Advanced economic theory of environmental management and policy. Treatment of externalities and market and non-market approaches to environmental improvement. Applications to research and policy. Advanced economic theory of environmental management and policy. Treatment of externalities and market and non-market approaches to environmental improvement. Applications to research and policy.
SA: AEC 923
Effective Summer 2015 Effective Fall 2019

DEPARTMENT OF HISTORY

HST 255  American Cinema and the American Century
Fall of every year. Summer of every year. 3(3-0)
History, evolution and transformation of the film industry in the extended twentieth century. From penny arcades and nickelodeons to the leading section of the global entertainment industry. Social and economic circumstances shaping developments in the film industry. Representations of race, gender and class in motion pictures. Production, distribution, consumption and reception of motion pictures in specific historical periods.
Effective Fall 2014 Effective Fall 2019

DEPARTMENT OF THEATRE

THR 202L  Voice Studio I Laboratory
Fall of every year. Spring of every year. 4(1-0) 1(0-2) A student may earn a maximum of 8 credits in all enrollments for this course. RB: THR 202 or concurrently R: Approval of department. Laboratory in musical theatre techniques for developing vocal awareness in acting the song.
Effective Fall 2014 Effective Fall 2019

THR 407  Movement Studio II
Fall of every year. 2(0-4) A student may earn a maximum of 6 credits in all enrollments for this course. P: THR 201 and THR 207 R: Open to students in the Department of Theatre. Stage combat, choreography skills and techniques used to create the illusion of violence on stage. Based on the Society of American Fight Directors Skills Proficiency Test. Stage combat, choreography skills, and techniques used to create the illusion of violence on stage.
Effective Fall 2015 Effective Fall 2019

DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

PHM 802  Cellular, Molecular and Integrated Systems Pharmacology
Spring of every year. 3(3-0) P: (BMB 801 or BMB 802) and (PHM 827 or PSL 828 or PSL 829) P: PHM 801 R: Open to doctoral students or approval of department. Cellular and molecular mechanisms of drug actions on organ systems of humans and other mammals.
Effective Spring 2018 Effective Spring 2019