MICHIGAN STATE UNIVERSITY

Report of
THE UNIVERSITY COMMITTEE ON CURRICULUM
to the Faculty Senate
November 16, 2021

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:**

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:**

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
TO: Faculty Senate

FROM: University Committee on Curriculum

SUBJECT: New Academic Programs and Program Changes: New Courses and Course Changes

PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

1. Change the requirements for the Bachelor of Science degree in Agribusiness Management in the Department of Agricultural, Food, and Resource Economics.
   a. Under the heading Requirements for the Bachelor of Science Degree in Agribusiness Management make the following changes:
      (1) In item 1., delete paragraph three:
          The completion of the Agribusiness Management mathematics requirement may also satisfy the College of Agriculture and Natural Resources and the University mathematics requirement.
      (2) In item 3. a. delete the following course:
          MTH 124 Survey of Calculus I 3
          Add the following course:
          SCM 304 Survey of Supply Chain Management 3
      (3) Delete item 3.g. and relitter item 3.h. to 3.g.

Effective Spring 2022.

2. Change the requirements for the Bachelor of Science degree in Environmental Economics and Management in the Department of Agricultural, Food, and Resource Economics.
   a. Under the heading Requirements for the Bachelor of Science Degree in Environmental Economics and Management make the following changes:
      (1) In item 3. a. delete the following course:
          MTH 124 Survey of Calculus I 3
          Add the following course:
          SCM 304 Survey of Supply Chain Management 3
      (2) Delete item 3. g. and relitter item 3.h. to 3.g.

Effective Spring 2022.
3. Change the requirements for the Bachelor of Science degree in Food Industry Management in the Department of Agricultural, Food, and Resource Economics.

   a. Under the heading Requirements for the Bachelor of Science Degree in Food Industry Management make the following changes:

   (1) In item 3. a. delete the following course:

   MTH 124 Survey of Calculus I     3

   Add the following course:

   SCM 304 Survey of Supply Chain Management     3

   (2) Delete item 3. g. and reletter item 3.h. to 3.g.

Effective Spring 2022.

COLLEGE OF ARTS AND LETTERS

1. Change the requirements for the Bachelor of Arts degree in Art History and Visual Culture in the Department of Art, Art History, and Design.

   a. Under the heading Requirements for the Bachelor of Arts Degree in Art History and Visual Culture make the following changes:

   (1) In item 2., change paragraph three to the following:

   The completion of requirement 3. c. referenced below satisfied the College requirement for a cognate.

   (2) In item 3. a. (2) add the following course under Asian:

   HA 262 Buddhist Art and Architecture Across Asia     3

   (3) In item 3. a. (3) delete the following course:

   HA 209 Ancient Art     3

   (4) In item 3. a. (5) delete the following course:

   HA 463 Japanese Art     4

   (5) Change item 3. c. to the following:

   A cognate of 15 credits from outside the student's major selected from areas such as museum studies, literature, a second language, material culture, or film studies. The cognate must be approved by the history of art advisor.

   (6) Delete item 3. d.

Effective Spring 2022.
2. Change the requirements for the **Minor in Art History and Visual Culture** in the Department of Art, Art History, and Design.
   a. Under the heading **Requirements for the Minor in Art History and Visual Culture** make the following change:
      (1) In item 2., add the following course:
      
      | Course Code | Course Name                          | Credits |
      |-------------|--------------------------------------|---------|
      | HA 262      | Buddhist Art and Architecture Across Asia | 3       |

      Effective Spring 2022.

3. Change the requirements for the **Bachelor of Fine Arts degree in Graphic Design** in the Department of Art, Art History, and Design.
   a. Under the heading **Requirements for the Bachelor of Fine Arts Degree in Graphic Design** make the following changes:
      (1) In item 3. a. (2) in the Electronic Art and Intermedia area, add Studio Art 384 and Studio Art 385.
      (2) Replace item 3. a. (3) with the following:
          Five of the following Graphic Design electives: Graphic Design 303, 462, 465, 466, 467, 468, and 491 (15 credits).

      Effective Spring 2022.

**ELI BROAD COLLEGE OF BUSINESS**

1. Change the requirements for the **Master of Business Administration degree** in the Eli Broad College of Business. The University Committee on Graduate Studies (UCGS) approved this request at their October 18, 2021 meeting.

   *The concentrations in the Master of Business Administration degree are noted on the student’s academic record when the requirements for the degree have been completed.*

   a. Under the heading **Requirements for the Master of Business Administration Degree** make the following changes:
      (1) In item 1. a., delete the following courses:

      | Course Code | Course Name                          | Credits |
      |-------------|--------------------------------------|---------|
      | MBA 820     | Marketing Management                  | 1.5     |
      | MBA 821     | Introduction to Supply Chain Management Concepts | 1.5     |
      | MBA 822     | Corporate Investment Decisions        | 1.5     |
      | MBA 830     | Marketing Strategy Execution          | 1.5     |
      | MBA 831     | Supply Chain Management Applications  | 1.5     |
      | MBA 832     | Corporate Financing Decisions         | 1.5     |
      | MBA 846     | MBA Executive Lecture Series          | 1.0     |

      Add the following courses:

      | Course Code | Course Name                          | Credits |
      |-------------|--------------------------------------|---------|
      | MBA 820     | Marketing Management                  | 3       |
      | MBA 821     | Introduction to Supply Chain Management Concepts | 3       |
      | MBA 822     | Corporate Investment Decisions        | 3       |
      | MBA 846     | Executive Lecture Series             | 1 to 2  |

      Effective Spring 2022.
2. Change the name of the Minor in Hospitality Real Estate to Real Estate in the School of Hospitality Business. The University Committee on Undergraduate Education (UCUE) approved this request at its October 7, 2021 meeting.

Students admitted to the major prior to Summer 2022 will be awarded a Minor in Hospitality Real Estate.

Students admitted to the major Summer 2022 and forward will be awarded a Minor in Real Estate.

Effective Summer 2022.

3. Change the requirements for the Minor in Real Estate in the School of Hospitality Business. The University Committee on Undergraduate Education (UCUE) approved this request at its October 7, 2021 meeting.

a. Under the heading Admission make the following changes:

   (1) Change item 1. to ‘Completion of 28 credits’.

   (2) Delete item 2. d. (Statistics courses)

b. Under the heading Minor in Real Estate replace the entire entry with the following:

   Students must complete all of the following courses (16 or 18 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HB 273</td>
<td>Hospitality Business Analytics</td>
<td>3</td>
</tr>
</tbody>
</table>
   | Or
   | ITM 209     | Business Analytics and Information Systems | 3     |
   | HB 282      | Real Estate Principles             | 3       |
   | Fi 311      | Financial Management               | 3       |
   | Or
   | Fi 320      | Introduction to Finance            | 3       |
   | HB 470      | Real Estate Asset Management       | 3       |
   | Fi 355      | Financial Modeling                 | 3       |
   | Or
   | HB 472      | Real Estate Financial Modeling     | 1       |
   | HB 474      | Real Estate Valuation              | 3       |

Effective Summer 2022.

**COLLEGE OF EDUCATION**

1. Change the requirements for Doctor of Education degree in the College of Education. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

a. Under the heading Admission delete the following statement from paragraph two:

   and submit scores earned on the Graduate Record Examination (GRE).

Effective Spring 2022.
2. Change the requirements for Educational Specialist degrees in the College of Education. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

   a. Under the heading Admission delete the following:

   Scores for the Graduate Record Examination (GRE) General Test are required at the time the application for admission to an educational specialist program is submitted. This examination must have been taken no longer than five years prior to the application for admission. At the discretion of the department, applicants may be admitted on a provisional basis pending the required Graduate Record Examination General Test scores. Students thus admitted on a provisional basis must take the Graduate Record Examination General Test within a specified time period after enrollment in order to be considered for admission to regular status.

   The Miller Analogies Test may be substituted for the Graduate Record Examination General Test by students in K–12 Educational Administration.

   Effective Spring 2022.

3. Change the requirements for Doctor of Philosophy degrees in the College of Education. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

   a. Under the heading Admission delete the following:

   Scores for the Graduate Record Examination General Test are required at the time the application for admission to a doctoral program is submitted. This examination must have been taken no longer than five years prior to the application for admission. At the discretion of the department, applicants may be admitted on a provisional basis pending the required Graduate Record Examination General Test scores. Students who are thus admitted on a provisional basis must take the Graduate Record Examination General Test within a specified time period after enrollment in order to be considered for admission to regular status.

   Effective Spring 2022.

4. Change the requirements for the Bachelor of Arts degree in Special Education in the Department of Counseling, Educational Psychology and Special Education. The Teacher Education Council (TEC) approved this request at its October 11, 2021 meeting.

   a. Under the heading Admission, delete the following:

   In addition to general admission requirements, applicants applying for admission to the Teacher Certification Program with a major in special education must also complete one or two supervised pre-admission experiences totaling at least 42 hours in the area of learning disabilities. Prospective special education students are strongly encouraged to talk with special education faculty about the potential value of sites for securing the required experience. Applicants to the special education program must submit a form verifying completion of the experience with the completed application. Only students who have completed the required experience will be considered for admission.

   Effective Spring 2022.
5. Change the requirements for the Master of Arts degree in Special Education in the Department of Counseling, Educational Psychology and Special Education. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

a. Under the heading Requirements for the Master of Arts Degree in Special Education make the following changes:

(1) Under the heading Learning Disabilities - Master of Arts delete item 1., and replace with the following:

1. All of the following courses (21 credits):
   CEP 801A Collaboration and Consultation in Special Education 3
   CEP 802A Reflection and Inquiry in Teaching Special Education
      I: Mild Impairments 3
   CEP 803A Assessment of Students with Mild Disabilities 3
   CEP 804B Advanced Diagnosis and Remediation for Students
      With Literacy Disabilities 3
   CEP 842 Content-Area Instruction for Students with Mild
      Disabilities 3
   CEP 850 Technology for Students with Disabilities 3
   Elective in TE or CEPSEN 3

2. One of the following courses (3 credits):
   CEP 804A Literacy Instruction for Students with Mild Disabilities 3
   TE 846 Accommodating Differences in Literacy Learners 3

3. Two of the following courses (6 credits):
   CEP 840 Policies, Practices, and Perspectives in Special
      Education 3
   CEP 841 Classroom and Behavior Management in the
      Inclusive Classroom 3
   CEP 844 Applied Behavior Analysis for Teachers 3

(2) Under the heading Learning Disabilities - Master of Arts with a Learning Disabilities Endorsement make the following changes:

(a) Change the total credits from ‘36’ to 30’.

(b) In item 1., delete the following courses:
   CEP 804A Literacy Instruction for Students with Mild Disabilities 3
   CEP 894G Special Education Practicum: Children and Youth
      with Learning Disabilities 3
   TE 846 Accommodating Differences in Literacy Learners 3

(c) Add the following:

2. One of the following courses (3 credits):
   CEP 802A Reflection and Inquiry in Teaching
      Special Education I: Mild Impairments 3
   TE 846 Accommodating Differences in Literacy Learners 3

Effective Spring 2022.
PART I – NEW PROGRAMS AND PROGRAM CHANGES

6. **Eliminate the hybrid offering for the Master of Arts degree in Higher Adult and Lifelong Education** in the Department of Educational Administration. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

Because of low enrollments, the HALE faculty have decided to no longer offer the Hybrid (2288) program for new students, as most choose to enroll into the existent fully online (6734) program. New admits are enrolling under the 6734 (online) program code. Only 5 students have enrolled in the 2288 program over the past 5 years, with the last enrolled student graduating Spring 2021.

Effective Spring 2022.

**JAMES MADISON COLLEGE**

1. **Change the requirements for the Bachelor of Arts degree in James Madison College [Comparative Cultures and Politics]**. The Teacher Education Council (TEC) approved this request at its October 11, 2021 meeting.

a. Under the heading **Requirements for the Bachelor of Arts Degree in James Madison College** make the following changes:

   (1) Under the heading **Comparative Cultures and Politics** add the following course in item 1. b. under both the **Comparative Studies group** and **Transnational Studies group**:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC 338</td>
<td>Environmental Justice and Global Change</td>
<td>4</td>
</tr>
</tbody>
</table>

Effective Spring 2022.

**COLLEGE OF MUSIC**

1. **Change the requirements for the Doctor of Musical Arts in Collaborative Piano** in the College of Music. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

a. Under the heading **Requirements for the Doctor of Musical Arts Degree in Collaborative Piano** replace item 5. a. and b. with the following:

   a. Complete 24 credits of Music 996 Doctoral Recital Performance. These credits must include at least six semesters of instruction in collaborative piano, 3 credits of instruction in applied piano (1 credit for each of three semesters), 4 credits of instruction in piano performance (1 credit for each of four semesters), 2 credits of instruction in chamber music (1 credit for each of two semesters), and 4 credits of collaborative performance of vocal repertoire (2 credits for each of two semesters). These requirements may be met concurrently.

   b. Perform five public collaborative recitals that have been approved by a committee of faculty from the student's piano area, two of which must be presented within two consecutive semesters, excluding summers. Two of the recitals must be instrumental recitals; two of the recitals must be vocal recitals. The fifth recital may be either an instrumental, vocal, or chamber recital. A recording of each of the five recitals must be submitted to the Office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree record.

Effective Fall 2022.
2. Change the requirements for the Doctor of Musical Arts degree in Music Composition in the College of Music. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

   a. Under the heading Requirements for the Doctor of Musical Arts Degree in Music Composition replace item 4. b. with the following:

   Complete an original music composition under the guidance of a faculty member in the composition area that is acceptable to the student’s guidance committee. A copy of the dissertation must be submitted to the office of the Associate Dean for Graduate Studies and will be retained as part of the permanent degree record.

Effective Spring 2022.

3. Change the requirements for the Master of Music degree in Music Performance in the College of Music. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

   a. Under the heading Requirements for the Master of Music Degree in Music Performance replace the entire entry with the following:

   The student must meet the requirements for one of the following three broad areas of music performance: instrumental music, instrumental specialist, or vocal music.

   **Instrumental Music**

   The student must meet the requirements for one of the following five major areas of instrumental music: piano, brass instruments, stringed instruments, woodwind instruments, or percussion instruments:

   1. **Piano**
   The program is available only under Plan B (without thesis). A total of 30 credits is required for the degree. The student's program of study must be approved by the student's academic advisor. The student must meet the requirements specified below:

   CREDITS

   a. Complete the following course (14 credits):
   
   MUS 896 Master's Performance 14

   These credits must include at least 6 credits of instruction in piano (1 to 2 credits for each of four semesters), 4 credits of piano performance (1 credit for each of four semesters), and 4 credits of instruction in chamber music (1 credit for each of four semesters).

   b. Complete 6 credits in musicology at the 400-level or above and two courses in music theory (4 to 6 credits) at the 400-level or above. (10 to 12 credits)

   c. Complete 4 to 6 credits of elective courses in music at the 400-level or above, exclusive of additional credits in MUS 896.

   d. Perform a piano recital under the guidance of the student's applied music instructor and approved by a committee from the piano area in a pre-recital hearing. A recording of the recital must be submitted to the office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree record.

   e. Complete the final oral certifying examination administered by a committee consisting of the student's applied music instructor, another member from the piano area, and a faculty member from either the music theory or musicology area.

   2. **Brass Instruments**
   The program is available only under Plan B (without thesis). A total of 30 credits is required for the degree. The student's program of study must be approved by the student's academic advisor. The student must meet the requirements specified below:

   CREDITS

   a. Complete the following course (14 credits):
   
   MUS 896 Master's Performance 14
These credits must include at least 6 credits of instruction in the major instrument (1 to 2 credits for each of four semesters), 4 credits of major ensemble (1 credit for each of four semesters), and 4 credits of instruction in chamber music (1 credit for each of four semesters).

b. Complete 6 credits in musicology at the 400-level or above and two courses in musicology (4 to 6 credits) at the 400-level or above. (10 to 12 credits)
c. Complete 4 to 6 credits of elective courses in music at the 400-level or above, exclusive of additional credits in MUS 896.
d. Perform a recital on the student’s major instrument under the guidance of the student’s applied music instructor and approved by a committee from the brass area in a pre-recital hearing. A recording of the recital must be submitted to the office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree record.
e. Complete the final oral certifying examination administered by a committee consisting of the student’s applied music instructor, another member from the brass area, and a faculty member from either the music theory or musicology area.

3. **Stringed Instruments**
The program is available only under Plan B (without thesis). A total of 30 credits is required for the degree. The student’s program of study must be approved by the student’s academic advisor. The student must meet the requirements specified below:

CREDITS

a. Complete the following course (14 credits):

MUS 896 Master’s Performance 14

These credits must include at least 6 credits of instruction in the major instrument (1 to 2 credits for each of four semesters), 4 credits of major ensemble (1 credit for each of four semesters), and 4 credits of instruction in chamber music (1 credit for each of four semesters).

b. Complete 6 credits in musicology at the 400-level or above and two courses in music theory (4 to 6 credits) at the 400-level or above. (10 to 12 credits)
c. Complete 4 to 6 credits of elective courses in music at the 400-level or above, exclusive of additional credits in MUS 896.
d. Perform a recital on the student’s major instrument under the guidance of the student’s applied music instructor and approved by a committee from the string area in a pre-recital hearing. A recording of the recital must be submitted to the office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree record.
e. Complete the final oral certifying examination administered by a committee consisting of the student’s applied music instructor, another member from the string area, and a faculty member from either the music theory or musicology area.

4. **Woodwind Instruments**
The program is available only under Plan B (without thesis). A total of 30 credits is required for the degree. The student’s program of study must be approved by the student’s academic advisor. The student must meet the requirements specified below:

CREDITS

a. Complete the following course (14 credits):

MUS 896 Master’s Performance 14

These credits must include at least 6 credits of instruction in the major instrument (1 to 2 credits for each of four semesters), 4 credits of major ensemble (1 credit for each of four semesters), and 4 credits of instruction in chamber music (1 credit for each of four semesters).

b. Complete 6 credits in musicology at the 400-level or above and two courses in music theory (4 to 6 credits) at the 400-level or above. (10 to 12 credits)
c. Complete 4 to 6 credits of elective courses in music at the 400-level or above, exclusive of additional credits in MUS 896.
d. Perform a recital on the student’s major instrument under the guidance of the student’s applied music instructor and approved by a committee from the woodwind area in a pre-recital hearing. A recording of the
recital must be submitted to the office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree record.

e. Complete the final oral certifying examination administered by a committee consisting of the student’s applied music instructor, another member from the woodwind area, and a faculty member from either the music theory or musicology area.

5. **Percussion Instruments**
The program is available only under Plan B (without thesis). A total of 30 credits is required for the degree. The student’s program of study must be approved by the student’s academic advisor. The student must meet the requirements specified below:

<table>
<thead>
<tr>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
</tr>
<tr>
<td>14</td>
</tr>
</tbody>
</table>

a. Complete the following course (14 credits):

- MUS 896 Master’s Performance (14 credits)

These credits must include at least 6 credits of instruction in the major instrument (1 to 2 credits for each of four semesters), 4 credits of major ensemble (1 credit for each of four semesters), and 4 credits of instruction in chamber music (1 credit for each of four semesters).

b. Complete 6 credits in musicology at the 400-level or above and two courses in music theory (4 to 6 credits) at the 400-level or above. (10 to 12 credits)

c. Complete 4 to 6 credits of elective courses in music at the 400-level or above, exclusive of additional credits in MUS 896.

d. Perform a percussion recital under the guidance of the student’s applied music instructor and approved by a committee from the percussion area in a pre-recital hearing. A recording of the recital must be submitted to the office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree record.

e. Complete the final oral certifying examination administered by a committee consisting of the student’s applied music instructor, another member from the percussion area, and a faculty member from either the music theory or musicology area.

**Instrumental Specialist**

The student must meet the requirements for one of the following three major specialties: brass instruments specialist, stringed instruments specialist, or woodwind instruments specialist:

1. **Brass Instruments Specialist**
The program is available only under Plan B (without thesis). A total of 30 credits is required for the degree. The student’s program of study must be approved by the student’s academic advisor. The student must meet the requirements specified below:

<table>
<thead>
<tr>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
</tr>
<tr>
<td>14</td>
</tr>
</tbody>
</table>

a. Complete both of the following courses (16 credits):

- MUS 847 Secondary or Specialist Emphasis: Brass (2 credits)
- MUS 896 Master’s Performance (14 credits)

Each of the 2 credits of MUS 847 is associated with instruction in one of the student’s two required secondary instruments. The 14 credits of MUS 896 must include at least 6 credits of instruction in the major instrument (1 to 2 credits for each of four semesters), 4 credits of major ensemble (1 credit for each of four semesters), and 4 credits of instruction in chamber music (1 credit for each of four semesters).

b. Complete 6 credits in musicology at the 400-level or above and two courses in music theory (4 to 6 credits) at the 400-level or above. (10 to 12 credits)

c. Complete 2 to 4 credits of elective courses in music at the 400-level or above, exclusive of additional credits in MUS 896.

d. Present a performance on each of the student’s two required secondary instruments. The performance must be acceptable to a committee of faculty in the area of brass instruments.

e. Perform a recital on the student’s primary instrument under the guidance of the student’s applied music instructor and approved by a committee from the brass area in a pre-recital hearing. A recording of the recital must be submitted to the office of the Associate Dean for
2. **Stringed Instruments Specialist**

The program is available only under Plan B (without thesis). A total of 30 credits is required for the degree. The student's program of study must be approved by the student's academic advisor. The student must meet the requirements specified below:

<table>
<thead>
<tr>
<th>CREDITS</th>
</tr>
</thead>
</table>
| **a.** Complete both of the following courses (15 credits):
  | MUS 846 Secondary or Specialist Emphasis: String | 1 |
  | MUS 896 Master's Performance | 14 |
  | The credit of MUS 846 is associated with instruction in the student's required secondary instrument. The 14 credits of MUS 896 must include at least 6 credits of instruction in the major instrument (1 to 2 credits for each of four semesters), 4 credits of major ensemble (1 credit for each of four semesters), and 4 credits of instruction in chamber music (1 credit for each of four semesters). |
| **b.** Complete 6 credits in musicology at the 400-level or above and two courses in music theory (4 to 6 credits) at the 400-level or above. (10 to 12 credits) |
| **c.** Complete 3 to 5 credits of elective courses in music at the 400-level or above, exclusive of additional credits in MUS 896. |
| **d.** Present a performance on the student's required secondary instrument. The performance must be acceptable to a committee of faculty in the area of stringed instruments. |
| **e.** Perform a recital on the student's primary instrument under the guidance of the student's applied music instructor and approved by a committee from the string area in a pre-recital hearing. A recording of the recital must be submitted to the office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree recording. |
| **f.** Complete the final oral certifying examination administered by a committee consisting of the student's applied music instructor, another member from the brass area, and a faculty member from either the music theory or musicology area. |

3. **Woodwind Instruments Specialist**

The program is available only under Plan B (without thesis). A total of 30 credits is required for the degree. The student's program of study must be approved by the student's academic advisor. The student must meet the requirements specified below:

<table>
<thead>
<tr>
<th>CREDITS</th>
</tr>
</thead>
</table>
| **a.** Complete both of the following courses (17 credits):
  | MUS 848 Secondary or Specialist Emphasis: Woodwind | 3 |
  | MUS 896 Master's Performance | 14 |
  | Each of the 3 credits of MUS 848 is associated with instruction in one of the student's three required secondary instruments. The 14 credits of MUS 896 must include at least 6 credits of instruction in the major instrument (1 to 2 credits for each of four semesters), 4 credits of major ensemble (1 credit for each of four semesters), and 4 credits of instruction in chamber music (1 credit for each of four semesters). |
| **b.** Complete 6 credits in musicology at the 400-level or above and two courses in music theory (4 to 6 credits) at the 400-level or above. (10 to 12 credits) |
| **c.** Complete 1 to 3 credits of elective courses in music at the 400-level or above, exclusive of additional credits in MUS 896. |
| **d.** Present a performance on each of the student's three required secondary instruments. Each of the three performances must be acceptable to a committee of faculty in the area of woodwind instruments. |
| **e.** Perform a recital on the student's primary instrument under the guidance of the student's applied music instructor and approved by a committee from the woodwind area in a pre-recital hearing. A recording |
of the recital must be submitted to the office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree recording.

f. Complete the final oral certifying examination administered by a committee consisting of the student’s applied music instructor, another member from the woodwind area, and a faculty member from either the music theory or musicology area.

Vocal Music

The program is available only under Plan B (without thesis). A total of 30 credits is required for the degree. The student's program of study must be approved by the student's academic advisor. The student must meet the requirements specified below:

CREDITS

1. Complete both of the following courses (11 credits):
   - MUS 435 Opera Theatre 1
   - MUS 896 Master's Performance 10
   The credits of MUS 896 must include at least 8 credits of instruction in voice (2 credits for each of four semesters) and 2 credits of major ensemble (1 credit each of two semesters)

2. Complete 6 credits in musicology at the 400-level or above and two courses in music theory (4 to 6 credits) at the 400-level or above. (10 to 12 credits)

3. Complete 7 to 9 credits of elective courses in music at the 400-level or above, exclusive of additional credits in MUS 896.

4. Complete one semester of study each in French, German, and Italian. Credits in courses in a foreign language may not be counted toward the requirements for the Master of Music degree. Courses completed as part of an undergraduate degree program may be used to satisfy this requirement.

5. Perform a vocal recital under the guidance of the student’s applied music instructor and approved by a committee from the vocal arts area in a pre-recital hearing. A recording of the recital must be submitted to the office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree recording.

6. Complete the final oral certifying examination administered by a committee consisting of the student’s applied music instructor, another member from the vocal arts area, and a faculty member from either the music theory or musicology area.

b. Delete the section Academic Standards.

Effective Fall 2022.

4. Change the requirements for the Doctor of Musical Arts degree in Music Performance in the College of Music. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

a. Under the heading Requirements for the Doctor of Musical Arts Degree in Music Performance replace items 4. a. and b. with the following:


   1) For those students whose major instrument is piano, these credits must include at least six semesters of instruction in applied piano, four semesters of instruction in chamber music (1 credit for each of four semesters), and four semesters of instruction in piano performance (1 credit for each of four semesters). These requirements may be met concurrently.

   2) For those students whose major instrument is a stringed, brass, woodwind or percussion instrument, these credits must include at least six semesters of instruction in the major instrument, six semesters of instruction in band or orchestra (1 credit for each of six semesters), and four semesters of instruction in chamber music (1 credit each of four semesters). These requirements may be met concurrently.

   3) For those students whose major instrument is voice, these credits must include at least six semesters of instruction in voice and two semesters of instruction in opera theater, chamber music, or choir (1-2 credits for each).
b. Perform four public recitals that have been approved in a pre-recital hearing by a committee of faculty from the student's area. Three of the recitals must be solo recitals, two of which must be presented within two consecutive semesters, excluding summers. The fourth recital must be a chamber music recital. For those students whose major instrument is a stringed, woodwind, brass or percussion instrument, a mock audition for a professional orchestra or wind ensemble, as outlined in the Graduate Handbook, may substitute for one solo recital with the prior approval of the applied teacher and the area chair. For those students whose major instrument is voice, a significant opera role, as determined by the faculty of the voice area, may substitute for the chamber music recital. A second significant opera role may substitute for one of the solo recitals. A recording of each of the four recitals, mock auditions, or opera roles must be submitted to the Office of the Associate Dean for Graduate Studies and will be retained by the College as part of the permanent degree record.

Effective Fall 2022.

COLLEGE OF NATURAL SCIENCE

1. Change the requirements for the Bachelor of Science degree in Human Biology in the College of Natural Science.

   a. Under the heading Requirements for the Bachelor of Science Degree in Human Biology make the following changes:

      (1) Delete item 3. a. (4).

      (2) Add the following item 3. g. (3):

      | PHY  | 221 | Studio Physics for Life Scientists I | 4 |
      | PHY  | 222 | Studio Physics for Life Scientists II | 4 |

      (3) Renumber items 3. g. (3), (4), and (5) to 3. g. (4), (5), and (6) respectively.

      (4) In item 3. i., delete the following courses:

      | IBIO | 483 | Environmental Physiology (W) | 4 |
      | NSC  | 496 | Directed Study in Human Biology | 1 to 3 |
      | NSC  | 497 | Internship in Human Biology | 1 to 3 |
      | NSC  | 498 | Research in Human Biology | 1 to 3 |

   Effective Spring 2022.

2. Change the requirements for the Bachelor of Science degree in Environmental Biology/Microbiology in the Department of Microbiology and Molecular Genetics.

   a. Under the heading Requirements for the Bachelor of Science Degree in Environmental Biology/Microbiology replace item 3, with the following:

      a. The following courses outside the Department of Microbiology and Molecular Genetics (61 to 70 credits):

      | (1) One of the following, either a. or b. (4 or 6 credits):
      | (a) BMB 461 Advanced Biochemistry I | 3 |
      | BMB 462 Advanced Biochemistry II | 3 |
      | (b) BMB 401 Comprehensive Biochemistry | 4 |
PART I – NEW PROGRAMS AND PROGRAM CHANGES

(2) All of the following courses (18 credits):
- CSS 210 Fundamentals of Soil Science 3
- ENE 280 Principles of Environmental Engineering and Science 3
- GLG 201 The Dynamic Earth 4
- GLG 421 Environmental Geochemistry 4
- IBIO 355 Ecology 3
- IBIO 355L Ecology Laboratory (W) 1

(3) One of the following groups of courses (6 or 9 credits):
(a) BS 161 Cell and Molecular Biology 3
(b) BS 162 Organismal and Population Biology 3
(c) LB 144 Biology I: Organismal Biology 4
(d) LB 145 Biology II: Cell and Molecular Biology 5
(e) BS 181H Honors Cell and Molecular Biology 3
(f) BS 182H Honors Organismal and Population Biology 3

This requirement is waived for students who selected item (3) (b) above.

(4) One of the following courses (2 credits):
- BS 171 Cell and Molecular Biology Laboratory 2
- BS 172 Organismal and Population Biology Laboratory 2
- BS 191H Honors Cell and Molecular Biology Laboratory 2
- BS 192H Honors Organismal and Population Biology Laboratory 2

(5) One of the following groups of courses (9 or 10 credits):
(a) CEM 141 General Chemistry 4
(b) CEM 142 General and Inorganic Chemistry 3
(c) CEM 161 Chemistry Laboratory I 1
(d) CEM 162 Chemistry Laboratory II 1
(e) LB 171 Principles of Chemistry I 4
(f) LB 172 Principles of Chemistry II 4
(g) LB 171L Introductory Chemistry Laboratory I 1
(h) LB 172L Principles of Chemistry II – Reactivity Laboratory 1
(i) CEM 152 Principles of Chemistry 3
(j) CEM 161 Chemistry Laboratory I 1
(k) CEM 162 Chemistry Laboratory II 1
(l) CEM 181H Honors Chemistry I 4
(m) CEM 182H Honors Chemistry II 4
(n) CEM 185H Honors Chemistry Laboratory 2

(6) One of the following groups of courses (8 credits):
(a) CEM 251 Organic Chemistry I 3
(b) CEM 252 Organic Chemistry II 3
(c) CEM 255 Organic Chemistry Laboratory 2

(7) One of the following (3 or 4 credits):
- MTH 132 Calculus I 3
- LB 118 Calculus I 4
- MTH 152H Honors Calculus I 3

(8) One of the following (3 credits):
- STT 231 Statistics for Scientists 3
- STT 421 Statistics I 3
- MTH 133 Calculus II 3

(9) One of the following groups of courses (8 or 10 credits):
(a) PHY 231 Introductory Physics I 3
(b) PHY 241 Physics for Cellular and Molecular
PART I – NEW PROGRAMS AND PROGRAM CHANGES

b. The following courses in the Department of Microbiology and Molecular Genetics (19 credits):

(1) All of the following courses (13 credits):
- MMG 301 Introductory Microbiology 3
- MMG 302 Introductory Laboratory for General and Allied Health Microbiology 1
- MMG 421 Prokaryotic Cell Physiology 3
- MMG 425 Microbial Ecology 3
- MMG 431 Microbial Genetics 3

(2) One of the following courses (3 credits):
- MMG 408 Advanced Microbiology Laboratory (W) 3
- MMG 494 Summer Undergraduate Research Institute in Genomics (W) 3

(3) One of the following two options (3 credits):
(a) MMG 491 Current Topics in Microbiology and Molecular Genetics 3
(b) MMG 492 Undergraduate Research Seminar 1

One of the following courses:
- MMG 499 Undergraduate Research 2
- MMG 499H Honors Research 2

(c) MMG 493 Professional Internship in Microbiology and Molecular Genetics 3

The completion of either of these three options fulfills the department’s capstone course requirement.

c. One course from two of the following areas (6 to 8 credits):

(1) CSS 455 Pollutants in the Soil Environment 3
(2) FOR 340 Forest Ecology 3
- PLB 402 Biology of Fungi 4
(3) FSC 440 Food Microbiology 3
(4) GEO 206 Physical Geography 3
- GEO 221 Introduction to Geographic Information 3

(5) GLG 435 Geomicrobiology 4
(6) MMG 445 Microbial Biotechnology (W) 3
(7) FOR 466 Natural Resource Policy 3
- IBIO 446 Environmental Issues and Public Policy 3
(8) FW 420 Stream Ecology 3
- FW 472 Limnology 3
(9) MMG 433 Microbial Genomics 3
- PLB 400 Introduction to Bioinformatics 3
(10) IBIO 357 Global Change Biology (W) 3

Effective Spring 2022.
3. Change the requirements in the Bachelor of Science degree in Genomics and Molecular Genetics in the Department of Microbiology and Molecular Genetics.

a. Under the heading Requirements for the Bachelor of Science Degree in Microbiology and Molecular Genetics make the following changes:

(1) In item 3. a. (4) (d) delete the following course:

CEM 186H Honors Chemistry Laboratory II 2

(2) In item 3. a. (6) delete the following course:

ZOL 341 Fundamental Genetics 4

Add the following course:

IBIO 341 Fundamental Genetics 4

(3) Replace item 3. a. (7) with the following:

One of the following groups of courses (8 to 10 credits)

(a) PHY 231 Introductory Physics I 3
    PHY 232 Introductory Physics II 3
    PHY 251 Introductory Physics Laboratory I 1
    PHY 252 Introductory Physics Laboratory II 1
(b) LB 273 Physics I 4
    LB 274 Physics II 4
(c) PHY 183 Physics for Scientists and Engineers I 4
    PHY 184 Physics for Scientists and Engineers II 4
    PHY 191 Physics Laboratory for Scientists, I 1
    PHY 192 Physics Laboratory for Scientists, II 1
(d) PHY 241 Physics for Cellular and Molecular Biologists I 4
    PHY 242 Physics for Cellular and Molecular Biologists II 4
    PHY 251 Introductory Physics Laboratory I 1
    PHY 252 Introductory Physics Laboratory II 1
(e) PHY 193H Honors Physics I – Mechanics 4
    PHY 294H Honors Physics II – Electromagnetism 4
    PHY 191 Physics Laboratory for Scientists, I 1
    PHY 192 Physics Laboratory for Scientists, II 1

(4) In item 3. b. make the following changes:

(a) Change the total credits from ‘19’ to ‘19 to 20’.
(b) In item (2) change the total credits from ‘3’ to ‘3 or 4’.
(c) In item (2) change the credits of ‘MMG 334’ from ‘3’ to ‘4’.
(d) In item (2) add the following course:

MMG 494 Summer Undergraduate Research Institute in Genomics (W) 3

(5) Change item 3. b. (3) to the following:

One of the following three options (3 credits):

(a) MMG 491 Current Topics in Microbiology and Molecular Genetics 3
(b) MMG 492 Undergraduate Research Seminar 1
One of the following courses:

MMG 499 Undergraduate Research 2
MMG 499H Honors Research 2
PART I – NEW PROGRAMS AND PROGRAM CHANGES

(c) MMG 493 Professional Internship in Microbiology and Microbiology and Molecular Genetics

The completion of Microbiology 491, 493; or Microbiology 492 and 499 or 499H, fulfills the department’s capstone course requirement.

(6) In item 3. c. delete the following courses:

CSS 441 Plant Breeding and Biotechnology 3
PLB 400 Introduction to Bioinformatics 3
ZOL 445 Evolution (W) 3

Add the following courses:

ANS 404 Introduction to Quantitative Genetics 3
CMSE 201 Computational Modeling and Data Analysis I 4
CMSE 202 Computational Modeling and Data Analysis II 4
CMSE 410 Bioinformatics and Computational Biology 3
CMSE 411 Computational Medicine 3
CSS 451 Biotechnology Applications for Plant Breeding and Genetics 3
IBIO 445 Evolution (W) 3

Effective Spring 2022.

4. Change the requirements in the Bachelor of Science degree in Microbiology in the Department of Microbiology and Molecular Genetics.

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

(1) In item 3. a. (4) (d) delete the following course:

CEM 186H Honors Chemistry Laboratory II 2

(2) Add item 3. a. (6) (e):

PHY 241 Physics for Cellular and Molecular Biologists I 4
PHY 242 Physics for Cellular and Molecular Biologists II 4
PHY 251 Introductory Physics Laboratory I 1
PHY 252 Introductory Physics Laboratory II 1

(3) In item 3. b. (1) change the total credits from ‘13’ to ‘10’ and delete the following course:

MMG 408 Advanced Microbiology Laboratory (W) 3

(4) Renumber item 3. b. (2) to item 3. b. (3).

(5) Add a new item 3. b. (2):

One of the following courses (3 credits):
MMG 408 Advanced Microbiology Laboratory (W) 3
MMG 494 Summer Undergraduate Research Institute in Genomics (W) 3

(6) Change item 3. b. (3) to the following:

One of the following, either (a), (b), or (c) (3 credits):
(a) MMG 491 Current Topics in Microbiology and Molecular Genetics 3
(b) MMG 492 Undergraduate Research Seminar 1
One of the following courses:

- MMG 499 Undergraduate Research 2
- MMG 499H Honors Research 2

(c) MMG 493 Professional Internship in Microbiology and Molecular Genetics 3

The completion of Microbiology 491, 493, or Microbiology 492 and 499 or 499H, fulfills the department's capstone course requirement.

(7) In item 3. c. delete the following course:

MMG 463 Medical Microbiology 3

Add the following courses:

- MMG 365 Medical Microbiology 3
- MMG 465 Advanced Medical Microbiology 3

Effective Spring 2022.

5. Change the requirements in the Doctor of Philosophy degree in Microbiology and Molecular Genetics in the Department of Microbiology and Molecular Genetics. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

a. Under the heading Admission replace the entire entry with the following:

Admission to the Doctor of Philosophy degree in Microbiology and Molecular Genetics is through the BioMolecular Science Gateway – First Year (BMS). The successful applicant will typically have: a bachelor’s degree (four-year or equivalent) or Master of Science degree that includes course work that demonstrates proficiency in math and science; a grade point average of 3.50 or above; significant research experience equivalent to a minimum of one full-time summer research experience or four semesters of part-time research experience; and strong letters of reference.

b. Under the heading Requirements for the Doctor of Philosophy Degree in Microbiology and Molecular Genetics replace the entire entry with the following:

The student must:

1. Complete a minimum of four graduate courses (excluding topics and seminar courses) covering the areas of genetics, microbiology, and biochemistry. At least two of these courses must be offered by the Department of Microbiology and Molecular Genetics.

   a. One course must focus on Molecular Biology or Genetics and include one of the following courses or an approved equivalent as approved by the Director of Graduate Studies.
      - BMB 801 Molecular Biology 3
      - MMG 833 Microbial Genetics 3
      - MMG 835 Eukaryotic Molecular Genetics 3

   b. One course must focus on Cell Biology or Cell Physiology and include one of the following courses or an approved equivalent as approved by the Director of Graduate Studies.
      - BMB 802 Metabolic Regulation and Signal Transduction 3
      - MMG 801 Integrative Microbial Biology 4
      - MMG 825 Cell Structure and Function 3

   c. Other approved course electives include:
      - BMB 803 Protein Structure and Function 2
      - BMB 805 Protein Structure, Design, and Mechanism 3
      - MMG 813 Molecular Virology 3
      - MMG 851 Immunology 3
      - MMG 861 Advanced Microbial Pathogenesis 3
2. Complete three special topics graduate seminar courses (MMG 803, MMG 991 or other departmental seminar courses as approved by the Director of Graduate Studies chosen to increase the breadth and depth of knowledge in your field.

3. Pass a comprehensive examination that includes a written research proposal, public seminar and oral examination with the student's guidance committee.


5. Submit a dissertation and a publishable manuscript based on original research and representing a new and significant contribution to knowledge.

All doctoral students in microbiology and molecular genetics are required to participate in laboratory teaching through enrollment of 1 credit of MMG 892 and are expected to attend departmental seminars through enrollment in 4 credits of MMG 892. In addition, all students must participate in the Work in Progress (WiPs) seminar series.

Effective Spring 2022.

6. Change the requirements for the Doctor of Philosophy degree in Plant Biology in the Department of Plant Biology. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

a. Under the heading Requirements for the Doctor of Philosophy Degree in Plant Biology make the following changes:

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

   PLB 804 Frontiers in Plant Biology 2

   (2) Replace item 1. c. delete the following courses:

   ZOL 891 Current Topics in Ecology and Evolution 1
   ZOL 895 Seminar 1

   Add the following courses:

   IBIO 891 Current Topics in Ecology and Evolution 1
   IBIO 895 Seminar 1

Effective Spring 2022.

COLLEGE OF NURSING

1. Change the requirements for the Doctor of Philosophy degree in Nursing. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

a. Under the heading Requirements for the Doctor of Philosophy Degree in Nursing make the following changes:

   (1) In item 1. change the total credits from '66' to '65'.

   (2) Under the Course Requirements in item 3., change the credits from '3' to '1 to 3'.

Effective Spring 2022.


**COLLEGE OF OSTEOPATHIC MEDICINE**

1. Change the requirements for the **Professional Program in Osteopathic Medicine** leading to the Doctor of Osteopathic Medicine degree the College of Osteopathic Medicine. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

   a. Under the heading **Requirements for the Doctor of Osteopathic Medicine Degree** make the following changes:

      (1) Under the heading **PreClerkship Curriculum** make the following changes:

         (a) Change the total credits from ‘98’ to ‘100’ and add the following course:

            OST 559 Pediatrics IV 1

         (b) Delete the following course:

            OST 580 Respiratory System 6

            Add the following course:

            OST 580 Respiratory System 7

      (2) Under the heading **Clerkship Curriculum** make the following changes:

         (a) Under the heading **Required Clinical Clerkship Core Rotation Courses** change ‘OST 653’ to ‘OSS 653’.

         (b) Under the heading **Required clinical elective clerkship rotation courses** add the following courses:

            OST 622 Addiction Medicine 3
            OST 623 Board Preparation 1 to 6
            OST 624 Essentials in Diabetes 3

   Effective Spring 2022.

**COLLEGE OF SOCIAL SCIENCE**

1. Change the requirements in the **Graduate Specialization in International Development** in the College of Social Science. The University Committee on Graduate Studies (UCGS) approved this request at its October 18, 2021 meeting.

   a. Under the heading **Requirements for the Graduate Specialization in International Development** replace the entire entry with the following:

   Any course that was used to satisfy the requirements for the undergraduate Specialization in International Development may not be used to satisfy the requirements for the Graduate Specialization in International Development. The student’s program of study must be approved by the graduate student advisor for international development and must meet the requirements specified below.

   The student must complete 12 credits as outlined below:

   (1) Complete two of the Core Courses listed below. Only one of the courses may be at the 400-level (6 credits).

   (2) Complete at least two additional courses of at least 3 credits each, which are relevant to international development, either from the Core Courses listed below or from applicable courses selected in consultation with the international development advisor. (6 credits)
PART I – NEW PROGRAMS AND PROGRAM CHANGES

Core Courses:

AFRE 817 Political Economy of Agricultural Trade Policy 3
AFRE 861 Agriculture in Economic Development 3
ANP 436 Globalization and Justice: Issues in Political and Legal Anthropology 3
CSUS 826 International Development Theory and Practice 3
CSUS 848 Community-Based Natural Resource Management in International Development 3
EAD 947 Comparative International Education Policy 3
EAD 972 International and Comparative Issues in Higher and Adult Education 3
EC 410 Issues in the Economics of Developing Countries 3
EC 840 International Trade: Theory and Commercial Policy 3
FOR 833 Human Dimensions of Forest Carbon Management 3
FOR 835 Forest Carbon Policy, Economics and Finance 3
GEO 816 The World System of Cities 3
GEO 872 Seminar in Human Geography 3
PHL 452 Ethics and Development 3
SOC 852 Migration and Social Change 3
TE 923 Comparative Perspectives on Curriculum, Instruction, and Teacher Education 3
WS 403 Women and Change in Developing Countries 3

Effective Spring 2022.

2. Change the requirements for the Bachelor of Science degree in Economic Geography in the Department of Geography, Environment, and Spatial Sciences.

   a. Under the heading Requirements for the Bachelor of Arts Degree in Economic Geography make the following changes:

   (1) In item 3., change the total credits from ‘42 or 43’ to ‘43 or 44’.

   (2) In item 3. d., change the total credits from ‘6’ to ‘7’ and add the following course:

      GEO 221L Introduction to Geographic Information Laboratory 1

   (3) In item 3. e., add the following courses:

      GEO 410 Geography of Food and Agriculture 3
      GEO 436 Spatial Analysis of Populations 3
      GEO 498 Internship in Geography 3

   (4) In item 3. h., delete the following courses:

      AFRE 320 Environmental Economics 3
      EC 306 Comparative Economic Systems 3
      UP 314 Methods for Investigation of Urban Systems 4
      UP 353 Land Use Planning 4

Add the following courses:

      AFRE 265 Ecological Economics 3
      AFRE 360 Environmental Economics 3
      CSUS 273 Introduction to Travel and Tourism 3
      EC 202 Introduction to Macroeconomics 3
      UP 458 Housing and Real Estate Development 3
      UP 478 Urban Transportation Planning 3
      UP 488 The Sustainable and Climate Resilient City 3

Effective Fall 2022.
3. Change the requirements for the **Minor in Geographic Information Science** in the Department of Geography, Environment, and Spatial Sciences.

   a. Under the heading **Requirements for the Minor in Geographic Information Science** make the following changes:

      (1) Delete item 2.

      (2) Renumber item 3. to item 2. and make the following changes:

         (a) Change the total credits from ‘14’ to ‘17’.

         (b) Delete the following courses:

            GEO 419 Application of Geographic Information Systems to Natural Resources Management 4
            GEO 423 Cartographic Design and Production 4
            GEO 428 Digital Terrain Analysis 4

         Add the following courses:

            GEO 326 Cartographic Design and Production 4
            GEO 428 Digital Terrain Analysis 3
            GEO 429 Geoprocessing 3
            GEO 490 Independent Study 3
            GEO 498 Internship in Geography 3

      (3) Replace the note in item 2. with the following:

         Both GEO 490 and 498 must include geographic information science, remote sensing, or cartography content to fulfill this requirement. Prior to enrolling in a section of either of these courses, the student must obtain approval from an undergraduate academic advisor in the Department of Geography, Environment, and Spatial Sciences.

      Effective Fall 2022.

4. Change the requirements for the **Bachelor of Arts degree in History Education**. The Teacher Education Council (TEC) approved this request at its October 11, 2021 meeting.

   a. Under the heading **Requirements for the Bachelor of Arts Degree in History Education** make the following changes:

      (1) In item 6, delete the following course:

         TE 250 Human Diversity, Power and Opportunity in Social Institutions 3

      Add the following course:

         TE 101 Social Foundations in Justice and Equity in Education 3

      Effective Spring 2022.
COLLEGE OF VETERINARY MEDICINE

1. Change the requirements for the Bachelor of Science degree in Veterinary Nursing in the College of Veterinary Medicine.

   a. Under the heading Admission, in paragraph four, change item 1. to the following:

      Completion of at least 28 credits of the University graduation requirements or transfer equivalents including:

   b. Under the heading Requirements for the Bachelor of Science Degree in Veterinary Nursing make the following changes:

      (1) In item 1., change paragraph three to the following:

         The University’s Tier II writing requirement for the Veterinary Nursing major is met by completing the following courses: Veterinary Medicine 410 and 412. Those courses are referenced in items 2. a. below.

      (2) In item 2., change the total credits from '102 credits' to '90 to 97 credits'.

      (3) In item 2. a. change the total credits from '72 credits' to '75 credits'.

      (4) In item 2. a., add the following to the existent list of courses:

          and

          One of the following courses (3 credits)

            VM  414  Veterinary Nursing Clerkship in Equine Medicine and Surgery  3
            VM  415  Veterinary Nursing Clerkship in Food Animal and Equine Medicine and Surgery  3
            VM  450  Veterinary Nursing Clerkship in Emergency Medicine  3
            VM  451  Veterinary Nursing Clerkship in Cardiology  3
            VM  452  Veterinary Nursing Clerkship in Neurology  3
            VM  453  Veterinary Nursing Clerkship in Ophthalmology  3
            VM  454  Veterinary Nursing Clerkship in Critical Care  3
            VM  458  Veterinary Nursing Clerkship in Companion Animal Diagnostic Ultrasound  3
            VM  466  Veterinary Nursing Clerkship in Large Animal Anesthesia  3
            VM  470  Veterinary Nursing Clerkship in Food Animal Medicine  3
            VM  480  Veterinary Nursing Clerkship in Clinical Pathology  3
            VM  482  Veterinary Nursing Clerkship in Necropsy  3
            VM  483  Veterinary Nursing Clerkship in Biomedical Research  3
            VM  484  Veterinary Nursing Clerkship in Zoo and Wildlife Medicine  3
            VM  486  Veterinary Nursing Clerkship in Clinical Parasitology  3
            VM  490  Veterinary Nursing Clerkship in Special Problems  3

      (5) In item 2. b., renumber item (3) to item (4).

      (6) Add the following item (3) in item 2. b.:

         (3) MTH  103A  College Algebra I  3
             MTH  103B  College Algebra II  3

         and

         One of the following:

         MTH  101  Quantitative Literacy I  3
         MTH  102  Quantitative Literacy II  3
         MTH  114  Trigonometry  3
         MTH  201  Elementary Mathematics for Teachers I  3
         STT  200  Statistical Methods  3
         STT  201  Statistical Methods  4

      (7) Replace item 2. c. with the following:
One of the following options, 15 credits from Elective Group 1 or 15 credits from Elective Group 2. Courses used to satisfy requirement 2. a. above may not be used to fulfill this requirement.

(1) **Veterinary Nursing Elective Group 1:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM 414</td>
<td>Veterinary Nursing Clerkship in Equine Medicine and Surgery</td>
<td>3 to 6</td>
</tr>
<tr>
<td>VM 415</td>
<td>Veterinary Nursing Clerkship in Food Animal and Equine Medicine and Surgery</td>
<td>3 to 6</td>
</tr>
<tr>
<td>VM 450</td>
<td>Veterinary Nursing Clerkship in Emergency Medicine</td>
<td>3</td>
</tr>
<tr>
<td>VM 451</td>
<td>Veterinary Nursing Clerkship in Cardiology</td>
<td>3</td>
</tr>
<tr>
<td>VM 452</td>
<td>Veterinary Nursing Clerkship in Neurology</td>
<td>3</td>
</tr>
<tr>
<td>VM 453</td>
<td>Veterinary Nursing Clerkship in Ophthalmology</td>
<td>3</td>
</tr>
<tr>
<td>VM 454</td>
<td>Veterinary Nursing Clerkship in Critical Care</td>
<td>3</td>
</tr>
<tr>
<td>VM 458</td>
<td>Veterinary Nursing Clerkship in Companion Animal Diagnostic Ultrasound</td>
<td>3</td>
</tr>
<tr>
<td>VM 466</td>
<td>Veterinary Nursing Clerkship in Large Animal Anesthesia</td>
<td>3</td>
</tr>
<tr>
<td>VM 470</td>
<td>Veterinary Nursing Clerkship in Food Animal Medicine</td>
<td>3 to 6</td>
</tr>
<tr>
<td>VM 480</td>
<td>Veterinary Nursing Clerkship in Clinical Pathology</td>
<td>3</td>
</tr>
<tr>
<td>VM 482</td>
<td>Veterinary Nursing Clerkship in Necropsy</td>
<td>3</td>
</tr>
<tr>
<td>VM 483</td>
<td>Veterinary Nursing Clerkship in Biomedical Research</td>
<td>3 to 12</td>
</tr>
<tr>
<td>VM 484</td>
<td>Veterinary Nursing Clerkship in Zoo and Wildlife Medicine</td>
<td>3 to 12</td>
</tr>
<tr>
<td>VM 486</td>
<td>Veterinary Nursing Clerkship in Clinical Parasitology</td>
<td>3</td>
</tr>
<tr>
<td>VM 490</td>
<td>Veterinary Nursing Clerkship in Special Problems</td>
<td>3 to 12</td>
</tr>
</tbody>
</table>

(2) **Veterinary Nursing Elective Group 2.** Complete 15 credits in courses from one of the following concentrations. All course selections must be approved by the Veterinary Nursing Program.

**Business Communication**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 230</td>
<td>Survey of Accounting Concepts</td>
<td>3</td>
</tr>
<tr>
<td>AFRE 100</td>
<td>Decision-making in the Agri-Food System</td>
<td>3</td>
</tr>
<tr>
<td>AFRE 130</td>
<td>Farm Management I</td>
<td>3</td>
</tr>
<tr>
<td>AFRE 203</td>
<td>Data Analysis for the Agri-Food system</td>
<td>3</td>
</tr>
<tr>
<td>AFRE 222</td>
<td>Agribusiness and Food Industry Sales</td>
<td>3</td>
</tr>
<tr>
<td>AFRE 232</td>
<td>Commodity Marketing I</td>
<td>3</td>
</tr>
<tr>
<td>AFRE 240</td>
<td>Food Product Marketing</td>
<td>3</td>
</tr>
<tr>
<td>AFRE 315</td>
<td>Labor and Personnel Management in Agri-Food System</td>
<td>3</td>
</tr>
<tr>
<td>AFRE 327</td>
<td>Global Agri-Food Industries and Markets</td>
<td>3</td>
</tr>
<tr>
<td>AFRE 435</td>
<td>Financial Management in the Agri-Food System</td>
<td>3</td>
</tr>
<tr>
<td>COM 100</td>
<td>Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 225</td>
<td>An Introduction to Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 240</td>
<td>Introduction to Organizational Communication</td>
<td>4</td>
</tr>
<tr>
<td>EC 201</td>
<td>Introduction to Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>EC 202</td>
<td>Introduction to Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>EAD 315</td>
<td>Student Leadership Training</td>
<td>3</td>
</tr>
<tr>
<td>FI 320</td>
<td>Introduction to Finance</td>
<td>3</td>
</tr>
<tr>
<td>HLR 211</td>
<td>Introduction to Organizational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>HLR 311</td>
<td>Applied Organizational Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>

**General Animal Science**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS 110</td>
<td>Introductory Animal Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>ANS 110L</td>
<td>Introductory Animal Agriculture Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ANS 134</td>
<td>Dairy Production I</td>
<td>3</td>
</tr>
<tr>
<td>ANS 200C</td>
<td>Dairy Cattle Genetics and Evaluation</td>
<td>2</td>
</tr>
<tr>
<td>ANS 200E</td>
<td>Introductory Animal Welfare Assessment</td>
<td>1</td>
</tr>
<tr>
<td>ANS 201</td>
<td>Animal Products</td>
<td>3</td>
</tr>
<tr>
<td>ANS 201L</td>
<td>Animal Products Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ANS 210</td>
<td>Introduction to Disciplines in Animal Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>ANS 211</td>
<td>Animal and Product Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>ANS 222</td>
<td>Introductory Beef Cattle Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 234</td>
<td>Dairy Production II</td>
<td>3</td>
</tr>
</tbody>
</table>
PART I – NEW PROGRAMS AND PROGRAM CHANGES

ANS 252 Introduction to Management of Avian Species 3
ANS 262 Introductory Sheep Management 3
ANS 272 Introductory Swine Management 3
ANS 305 Applied Animal Behavior 3
ANS 305L Applied Animal Behavior Laboratory 1
ANS 307 Animal Reproduction 3
ANS 309 Animal Health and Disease Management 3
ANS 313 Principles of Animal Feeding and Nutrition (W) 4
ANS 314 Genetic Improvement of Domestic Animals (W) 4
ANS 334 Dairy Management I 3
ANS 401 Ethical Issues in Animal Agriculture 1
ANS 407 Food and Animal Toxicology 3
ANS 413 Non-Ruminant Nutrition 4
ANS 418 Animal Agriculture and the Environment 3
ANS 422 Advanced Beef Cattle Feedlot Management 3
ANS 425 Animal Biotechnology 3
ANS 427 Environmental Toxicology and Society 3
ANS 442 Advanced Horse Management 3
ANS 445 Equine Exercise Physiology 4
ANS 455 Avian Physiology 4
ANS 472 Advanced Swine Management 3
ANS 480 Animal Systems in International Development 3
ANS 483 Ruminant Nutrition 3

General Zoo and Wildlife

EPI 390 Disease in Society: Introduction to Epidemiology and Public Health 4
FW 101 Fundamentals of Fisheries and Wildlife Ecology and Management 3
FW 110 Conservation and Management of Marine Resources 3
FW 181 Introduction to Science, Technology, the Environment and Public Policy 3
FW 364 Ecological Problem Solving 3
FW 413 Wildlife Research and Management Techniques 3
FW 423 Principles of Fish and Wildlife Disease 3
FW 423L Principles of Fish and Wildlife Disease Laboratory 1
FW 424 Population Analysis and Management 4
FW 444 Conservation Biology 3
FW 449 Wildlife Policy 3
FW 491 Special Topics in Fisheries and Wildlife 1 to 3
IBIO 313 Animal Behavior 3
IBIO 341 Fundamental Genetics 4
IBIO 355 Ecology 3
IBIO 355L Ecology Laboratory (W) 1
IBIO 369 Introduction to Zoo and Aquarium Science 3
IBIO 408 Histology 4
IBIO 413 Laboratory in Behavioral Neuroscience (W) 4
IBIO 415 Ecological Aspects of Animal Behavior (W) 3
NEU 300 Neurobiology 3

Sustainability and Policy

AFRE 100 Decision-making in the Agri-Food System 3
AFRE 206 World Food, Population and Poverty 3
ANR 250 Global Issues in Agriculture and Natural Resources 3
ANS 124 Introduction to Sustainable Agriculture and Food Systems 2
ANS 418 Animal Agriculture and the Environment 3
ANS 424 Sustainable Agriculture and Food Systems: Integration and Synthesis 3
ANS 480 Animal Systems in International Development 3
CSS 101 Introduction to Crop Science 3
CSS 120 Issues in Food and Agriculture 3
CSS 124 Introduction to Sustainable Agriculture and Food Systems 1
CSS 222 New Horizons in Biotechnology 2
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 201</td>
<td>Introduction to Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>EC 202</td>
<td>Introduction to Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>EPI 390</td>
<td>Disease in Society: Introduction to Epidemiology and Public Health</td>
<td>4</td>
</tr>
<tr>
<td>FW 434</td>
<td>Human Dimensions of Fisheries and Wildlife Management (W)</td>
<td>3</td>
</tr>
<tr>
<td>FW 445</td>
<td>Biodiversity Conservation Policy and Practice</td>
<td>3</td>
</tr>
<tr>
<td>IBIO 446</td>
<td>Environmental Issues and Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>HRT 251</td>
<td>Organic Farming Principles and Practices</td>
<td>3</td>
</tr>
<tr>
<td>PHL 380</td>
<td>Nature of Science</td>
<td>3</td>
</tr>
<tr>
<td>SOC 161</td>
<td>International Development and Change</td>
<td>3</td>
</tr>
<tr>
<td>SOC 252</td>
<td>Introduction to Environmental Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Pharmacology and Toxicology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANS 407</td>
<td>Food and Animal Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>ANS 427</td>
<td>Environmental Toxicology and Society</td>
<td>3</td>
</tr>
<tr>
<td>BMB 200</td>
<td>Introduction to Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>EPI 390</td>
<td>Disease in Society: Introduction to Epidemiology and Public Health</td>
<td>4</td>
</tr>
<tr>
<td>NEU 300</td>
<td>Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>PHL 380</td>
<td>Nature of Science</td>
<td>3</td>
</tr>
<tr>
<td>PHM 350</td>
<td>Introductory Human Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>PHM 351</td>
<td>Fundamentals of Drug Safety</td>
<td>3</td>
</tr>
<tr>
<td>PHM 431</td>
<td>Pharmacology of Drug Addiction</td>
<td>3</td>
</tr>
<tr>
<td>PHM 450</td>
<td>Introduction to Chemical Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>Ecology and Resource Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFRE 265</td>
<td>Ecology and Economics</td>
<td>3</td>
</tr>
<tr>
<td>ANS 124</td>
<td>Introduction to Sustainable Agriculture and Food Systems</td>
<td>2</td>
</tr>
<tr>
<td>ANS 418</td>
<td>Animal Agriculture and the Environment</td>
<td>3</td>
</tr>
<tr>
<td>FOR 419</td>
<td>Applications of Geographic Information Systems to Natural Resources Management</td>
<td>4</td>
</tr>
<tr>
<td>FW 181</td>
<td>Introduction to Science, Technology, the Environment and Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>FW 364</td>
<td>Ecological Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>FW 413</td>
<td>Wildlife Research and Management Techniques</td>
<td>3</td>
</tr>
<tr>
<td>FW 417</td>
<td>Wetland Ecology and Management</td>
<td>3</td>
</tr>
<tr>
<td>FW 423</td>
<td>Principles of Fish and Wildlife Disease</td>
<td>3</td>
</tr>
<tr>
<td>FW 423L</td>
<td>Principles of Fish and Wildlife Disease Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>FW 424</td>
<td>Population Analysis and Management</td>
<td>4</td>
</tr>
<tr>
<td>FW 434</td>
<td>Human Dimensions of Fisheries and Wildlife Management (W)</td>
<td>3</td>
</tr>
<tr>
<td>FW 463</td>
<td>Wildlife Disease Ecology</td>
<td>3</td>
</tr>
<tr>
<td>IBIO 355</td>
<td>Ecology</td>
<td>3</td>
</tr>
<tr>
<td>IBIO 355L</td>
<td>Ecology Laboratory (W)</td>
<td>1</td>
</tr>
<tr>
<td>Animal Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFRE 130</td>
<td>Farm Management I</td>
<td>3</td>
</tr>
<tr>
<td>ANS 110</td>
<td>Introductory Animal Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>ANS 110L</td>
<td>Introductory Animal Agriculture Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ANS 134</td>
<td>Dairy Production I</td>
<td>3</td>
</tr>
<tr>
<td>ANS 222</td>
<td>Introductory Beef Cattle Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 233</td>
<td>Dairy Feed Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 234</td>
<td>Dairy Production II</td>
<td>3</td>
</tr>
<tr>
<td>ANS 252</td>
<td>Introduction to Management of Avian Species</td>
<td>3</td>
</tr>
<tr>
<td>ANS 262</td>
<td>Introductory Sheep Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 272</td>
<td>Introductory Swine Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 309</td>
<td>Animal Health and Disease Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 334</td>
<td>Dairy Management I</td>
<td>2</td>
</tr>
<tr>
<td>ANS 401</td>
<td>Ethical Issues in Animal Agriculture</td>
<td>1</td>
</tr>
<tr>
<td>ANS 422</td>
<td>Advanced Beef Cattle Feedlot Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 442</td>
<td>Advanced Horse Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 472</td>
<td>Advanced Swine Management</td>
<td>3</td>
</tr>
<tr>
<td>Animal Products and Nutrition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANS 110</td>
<td>Introductory Animal Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>ANS 201</td>
<td>Animal Products</td>
<td>3</td>
</tr>
</tbody>
</table>
**PART I – NEW PROGRAMS AND PROGRAM CHANGES**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS 201L</td>
<td>Animal Products Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ANS 211</td>
<td>Animal and Product Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>ANS 233</td>
<td>Dairy Feed Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 313</td>
<td>Principles of Animal Feeding and Nutrition (W)</td>
<td>4</td>
</tr>
<tr>
<td>ANS 407</td>
<td>Food and Animal Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>ANS 413</td>
<td>Non-Ruminant Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>ANS 483</td>
<td>Ruminant Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Spring 2022.
PART II - NEW COURSES

DEPARTMENT OF ART, ART HISTORY, AND DESIGN

HA 262  Buddhist Art and Architecture Across Asia
Fall of even years. 3(3-0) P: Completion of Tier I Writing Requirement RB: HA 101 and HA 102
Historical, iconographic, stylistic, architectural, and technical studies of the most important Buddhist monuments in Asia.
Effective Spring 2022

DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

BMB 370  Introductory Biochemistry Laboratory
Fall of every year. Spring of every year. 3(2-3) P: {(MTH 116 or LB 117) or (MTH 103 and MTH 114)} and (BS 171 or BS 191H or LB 145) and (CEM 162 or CEM 185H or LB 172L) R: Open to undergraduate students in the Biochemistry and Molecular Biology/Biotechnology Major or in the Biochemistry and Molecular Biology major or in the Lyman Briggs Biochemistry and Molecular Biology Coordinate Major or in the Lyman Briggs-Biochemistry/Biotechnology Coordinate Major or approval of department.
Basic quantitative laboratory introducing biochemical methods and principles for the study of proteins and nucleic acids using data analysis.
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 Summer 2022

DEPARTMENT OF COMMUNITY SUSTAINABILITY

CSUS 400  Topics in Environmental Justice
Fall of every year. Spring of every year. 3(3-0) P: ((CSUS 200 and CSUS 300) or approval of department) and completion of Tier I writing requirement
Historical and contemporary sociopolitical conditions facilitating the rise of environmental justice movements domestically and abroad. Race and Environmental Racism. Industrial and waste siting, land grabs, water crisis, climate justice, food sovereignty. Environmental justice activism including logic models and theories of change, participatory community research, economic viability and democracy.
Effective Summer 2022

DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY STUDIES

HDFS 438  Applied Resource Management Practicum
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: HDFS 238 R: Open to juniors or seniors in the College of Social Science.
Strategies and techniques to apply resource management with individuals, households, and communities.
Effective Fall 2022

MSU COLLEGE OF LAW

LAW 811G  Global Food Laws: Role of the International Agencies
On Demand. 0 to 6 credits. R: Open to law advanced students in the MSU College of Law.
Roles of the World Trade Organization, World Health Organization, Food and Agriculture Organization, other international agencies in global food laws, including food safety and international food trade disputes.
Effective Spring 2022
DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS

MMG 493  Professional Internship in Microbiology and Molecular Genetics
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. P: Completion of Tier I Writing Requirement R: Open to sophomores or juniors or seniors in the Department of Microbiology and Molecular Genetics. Approval of department.
Professional work experience in a private or public sector organization related to the student’s major.
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 Summer 2021

MMG 494L  Summer Undergraduate Research Institute in Genomics   (W)
Summer of every year. 3(2-12) P: (Completion of Tier I Writing Requirement) and (MMG 301 and MMG 302) RB: MMG 431 or IBIO 341 R: Open to undergraduate students in the Environmental Biology/Microbiology Major or in the Genomics and Molecular Genetics Major or in the Microbiology Major. Not open to students with credit in MMG 408 or MMG 434.
Directed independent research in teams using state-of-the-art genetic and genomic methods. Offered first half of semester.
Effective Summer 2021

COLLEGE OF OSTEOPATHIC MEDICINE

OST 625  Introduction to Military Medicine Elective
On Demand. 6 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course. RB: Medical students on HPSP scholarship R: Open to graduate students in the College of Osteopathic Medicine.
Provides osteopathic medical students with an introduction to military medicine capabilities and operations.
Request the use of the Pass-No Grade (P-N) system.
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 Summer 2022

OST 626  Special Topics in Healthcare Ethics: Case Studies
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to graduate students in the College of Osteopathic Medicine. Approval of college.
Increasing the knowledge of healthcare ethics and application to case studies.
Exploration of the evaluation and critical appraisal of ethical issues in patient cases.
Request the use of the Pass-No Grade (P-N) system.
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 Spring 2022

OST 627  Fundamentals of Health Policy and Advocacy
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to graduate students in the College of Osteopathic Medicine. Approval of college.
Legislative, media and organizational opportunities for physician advocacy.
Request the use of the Pass-No Grade (P-N) system.
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 Spring 2022
PART III – COURSE CHANGES

DEPARTMENT OF ACCOUNTING AND INFORMATION SYSTEMS

ACC 807  Financial Statement Analysis
Using Financial Statement Data for Decision-Making - An Analytics Approach
Fall of every year. Spring of every year. 3(3-0) P: MBA 802 or ACC 301 RB: It is recommended that MBA students take ACC 805 prior to enrollment in this course. RB: Intermediate financial accounting R: Open to master's students in the Accounting major and open to MBA students or approval of department. R: Open to master's students in the Accounting Major or approval of department.

Effective Fall 2010  Effective Summer 2022

ACC 808  Contemporary Financial Reporting Decisions
Analyzing Financial Reporting Decisions
Fall of every year. Spring of every year. 3(3-0) P: ACC 301 RB: Undergraduate degree in accounting. RB: Intermediate level financial accounting R: Open to master's students in the Accounting Major or approval of department.

Effective Fall 2010  Effective Summer 2022

ACC 814  Advanced Auditing
Fall of every year.  Spring of every year. Summer of every year. 3(3-0) P: ACC 411 R: Open to master's students in the Accounting Major or approval of department.

Economic, regulatory and technology environments as it relates to auditing in the public and private sectors. Risk analysis, professional standards, audit evidence gathering and evaluations, accounting and auditing research and decision making. Economic, regulatory and technology environments relating to auditing in the public and private sectors. Risk analysis, professional standards, audit evidence gathering and evaluations, accounting and auditing research and decision making. Data visualization and analytics tools used in auditing. Statistical methods for sample selection and analysis. Risk assessment of information produced by the entity and end user computing systems.
Effective Fall 2010  Effective Summer 2022

ACC 821  Enterprise Database Systems
Fall of every year. 3(3-0) Interdepartmental with Information Technology Management. R: Open to master's students in the Accounting Major or approval of department. Not open to students with credit in ACC 321.

Effective Fall 2010  Effective Spring 2022
PART III – COURSE CHANGES

ACC 822  Information Systems Project Management  
Fall of every year. Spring of every year. 1 to 3 credits. Interdepartmental with Information Technology Management.  
R: Open to graduate students in the Accounting major and open to MBA students or approval of department.  
R: Open to master's students in the Accounting Major or approval of department.  
Management of project scope, time, and costs. Planning and control of projects. Program and portfolio management. Consulting issues for effective project management.  
Management of information system projects. Management of project scope, time, cost and quality. Optimization of project resources. Planning and control of projects. Program and portfolio management. Consulting issues for effective project management. Waterfall, lean and agile methodologies are discussed.  
Effective Fall 2013 Effective Summer 2022

ACC 823  Advanced Enterprise Database Systems  
Fall of every year. Spring of every year. 3(3-0) Interdepartmental with Information Technology Management.  
P: ACC 321 or ACC 821 or ITM 821  
P: ACC 321 or ACC 821  
R: Open to graduate students in the Accounting Major or approval of department.  
Effective Fall 2010 Effective Summer 2022

ACC 824  Governance and Control of Enterprise Systems  
Fall of every year. Spring of every year. 3(3-0) Interdepartmental with Information Technology Management.  
R: Open to graduate students in the Accounting major or in the Master of Business Administration in Business Administration or approval of department.  
R: Open to master's students in the Accounting Major or approval of department.  
Governance and control of information technologies. Identification and valuation of key information and communication technologies, frameworks for assessing information system risk, information system auditing, and international standards for information technology governance and control. Governance and control of information technologies. Design and control of IT general controls. Modeling and forecasting system IT internal control performance. Identification and valuation of key information and communication technologies. Frameworks for assessing information system risk and cybersecurity. Information system auditing, and international standards for information technology governance and control. Cyber security.  
Effective Fall 2010 Effective Summer 2022

ACC 825  Object-Oriented Business Information Systems  
Fall of every year. Spring of every year. 3(3-0) Interdepartmental with Information Technology Management.  
P: ACC 321 or ACC 821 P: (ACC 321 or ACC 821) and ACC 823  
R: Open to graduate students in the Accounting Major or approval of department.  
Effective Fall 2010 Effective Summer 2022

ACC 826  Enterprise Information Systems  
Spring of every year. 3(3-0) Interdepartmental with Information Technology Management.  
R: Open to graduate students in the Accounting major or in the Master of Business Administration in Business Administration or approval of department.  
R: Open to master's students in the Accounting Major or approval of department.  
Enterprise resource planning (ERP) systems. ERP implementation issues and success factors. Use of enterprise systems, and exploring future directions in ERP systems.  
Effective Summer 2011 Effective Summer 2022
ACC 827  Accounting Analytics
Fall of every year. Spring of every year. Summer of every year. 3(3-0) Interdepartmental with Information Technology Management. P: (ACC 321 or ACC 821) and ACC 411 R: Open to master's students in the Accounting Major. P: (ACC 321 or ACC 821) and ACC 411 R: Open to master's students in the Accounting Major or approval of department.

- Develop an accounting analytics mindset. Determine and apply appropriate data analytic techniques based upon the accounting environment and situation. Use data visualization, predictive analytics, and other analytics software as appropriate. Data visualization, predictive analytics, time series analysis, machine learning, supervised and unsupervised learning, association analysis, and other analytics techniques as appropriate to accounting environment and situation.

Effective Spring 2021  Effective Summer 2022

ACC 830  Tax Research
Fall of every year. 3(3-0) P: ACC 331 R: Open to master's students in the Accounting major and open to MBA students or approval of department. P: ACC 331 R: Open to master's students in the Accounting Major or approval of department.

- Writing and presentation techniques of tax research. Tax practice and procedure, and partnership taxation. Case studies focused on online tax research techniques. Emphasis on effectively organizing and presenting research results.

Effective Fall 2010  Effective Summer 2022

ACC 833  Federal Income Taxation of Corporations and Shareholders
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: ACC 331 R: Open to master's students in the Accounting major and open to MBA students or approval of department. P: ACC 331 R: Open to master's students in the Accounting Major or approval of department.


Effective Fall 2010  Effective Summer 2022

ACC 836  U.S. Taxation of Multinational Transactions
Spring of every year. 3(3-0) P: ACC 331 RB: ACC 833 R: Open to master's students in the Accounting major and open to MBA students or approval of department. P: ACC 331 R: Open to master's students in the Accounting Major or approval of department.

- Federal income taxation of transactions by U.S. persons outside the United States, and of investments by foreign persons in the U.S.

Effective Fall 2010  Effective Summer 2022

ACC 841  Strategic Management Controls Systems
The Role of Accounting in Strategy Implementation
Fall of every year. Spring of every year. 1 to 3 credits. P: (MBA 812 or ACC 341) and (MGT 409 or (MBA 850 or concurrently)) R: Open to master's students in the Accounting Major and open to MBA students or approval of department. R: Open to master's students in the Accounting Major or approval of department.

- Management accounting concepts for strategic management and business unit management. Performance measurement, planning and budgeting, and control system design. Strategic management control systems and accounting data supporting the design, implementation, monitoring, and continuous assessment of business strategies. Emerging risks and opportunities are also evaluated.

Effective Fall 2015  Effective Summer 2022
**PART III – COURSE CHANGES**

### ACC 843  
Value Chain Accounting and Analytics  
Fall of every year. Summer of every year. 1 to 3 credits.  
**P:** (MBA 812 or ACC 341) and (MBA 804 or MKT 317)  
**R:** Open to master's students in the Accounting Major and open to MBA students or approval of department.  
**R:** Open to master's students in the Accounting Major or approval of department.  
**Effective Spring 2016 Effective Summer 2022**

### ACC 850  
Accounting for Multiunit Enterprises  
Fall of every year.  
**P:** ACC 301 and ACC 331  
**R:** Open to graduate students in the Accounting major or approval of department.  
**R:** Open to master's students in the Accounting Major or approval of department.  
Financial reporting and tax issues related to business combinations and divestitures and the resulting consolidated reporting of the multi-unit enterprise's financial and tax information. Analysis of tax and financial accounting issues involved in business acquisitions. Post-acquisition tax and financial reporting of the combined entity.  
SA: ACC 450  
**Effective Fall 2010 Effective Summer 2022**

### DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

#### BMB 470  
Advanced Molecular Biology Laboratory  
Fall of every year.  
**P:** CEM 262 and BMB 461.  
**P:** BMB 370 and BMB 461  
**R:** BMB 462  
Open to students in the Biochemistry and Molecular Biology/Biotechnology Major or in the Biochemistry and Molecular Biology major or in the Lyman Briggs Biochemistry and Molecular Biology Coordinate Major or in the Lyman Briggs-Biochemistry/Biotechnology Coordinate Major or approval of department.  
Methods of molecular biology and the underlying principles on which these methods are based.  
SA: BCH 472, BMB 472  
**Effective Fall 2021 Effective Fall 2023**

#### BMB 471  
Advanced Biochemistry Laboratory  
Spring of every year.  
**P:** BMB 461 and CEM 262 and CMSE 201  
**P:** BMB 370 and BMB 461 and CMSE 201  
Open to students in the Biochemistry and Molecular Biology/Biotechnology Major or in the Biochemistry and Molecular Biology major or in the Lyman Briggs Biochemistry and Molecular Biology Coordinate Major or in the Lyman Briggs-Biochemistry/Biotechnology Coordinate Major or approval of department.  
Biochemical methods and principles used in the study of enzymes (proteins), carbohydrates, lipids, and cell organelles.  
SA: BCH 471  
**Effective Spring 2022 Effective Fall 2023**

#### BMB 829  
Methods of Macromolecular Analysis and Synthesis  
Special Problems in Macromolecular Analysis and Synthesis  
Fall of every year.  
**P:** BMB 462 or concurrently  
**R:** BMB 461 and BMB 462  
SA: BCH 829  
**Effective Fall 2001 Effective Fall 2022**
DEPARTMENT OF COMMUNITY SUSTAINABILITY

CSUS 429  Program Evaluation for Community Sustainability
Fall of every year. 3(3-0) P: (((MTH 103) and (STT 200 or STT 201)) or (MTH 116 or MTH 124)) and (CSUS 200 or EEM 255) and completion of Tier I writing requirement.
Concepts, theories, and procedures in program evaluation. Practical methods and skills to plan and implement evaluations of community, agriculture, and natural resources programs.
SA: ACR 415
Effective Spring 2019 Effective Summer 2022

SCHOOL OF HOSPITALITY BUSINESS

HB 210  Casino Operations and Management
Fall of every year. Spring of every year. 3(3-0) R: Open to students in the Hospitality Business Major.
Social issues of gaming, casino games of chance, management controls and marketing plans.
Effective Summer 2021 Effective Summer 2022

HB 273  Hospitality Business Analytics
Fall of every year. Spring of every year. 3(3-0) P: CSE 101 or CSE 102 P: CSE 102 RB: Basic Microsoft Excel Skills R: Open to students in the Hospitality Business Major or in the Hospitality Business Real Estate Investment Management Minor. R: Open to students in the Hospitality Business Major or in the Real Estate Minor. Not open to students with credit in ITM 209.
Quantitative and analytical skills used to communicate key business information effectively. Study of how business modeling and data analytics can increase decision making efficacy. Course topics include but are not limited to sensitivity and scenario analysis, financial modeling and forecasting, and applied business statistics methods.
SA: HB 473
Effective Summer 2021 Effective Summer 2022

HB 282  Hospitality Business Real Estate
Real Estate Principles
Fall of every year. Spring of every year. 3(3-0) R: Open to students in the Hospitality Business Major or in the Hospitality Business Real Estate Investment Management Minor. R: Open to students in the Hospitality Business Major or in the Real Estate Minor.
Process of planning and developing a commercial real estate project: conceptualization and planning, feasibility, commitment, design layout and construction, and management and operation.
SA: HB 473
Effective Summer 2021 Effective Summer 2022

HB 337  Hospitality Information Systems
Fall of every year. Spring of every year. 3(3-0) P: CSE 101 or CSE 102 P: CSE 102 R: Open to juniors or seniors in the Hospitality Business Major.
Technology for gathering, analyzing, storing and communicating information within the hospitality industry.
Effective Summer 2020 Effective Summer 2022

HB 345L  Hospitality Food Production Systems Lab
Fall of every year. Spring of every year. 1(0-2) P: HB 345 or concurrently P: HB 265 R: Open to juniors or seniors in the Hospitality Business Major.
Practical applications of organization in food and beverage operations. Product knowledge, especially purchasing, storing, preparing, and production in food service operations. Menu development and recipe management.
Effective Summer 2021 Effective Summer 2022
HB 380  Event Planning and Management  
Fall of every year. 3(3-0)  P: HB 280  R: Open to juniors or seniors in the Hospitality Business Major.  
Identify the logistical steps for planning an event. The relationship between the goal and objectives for holding an event. Pre-event planning and project management. Understand the detailed components of creating an event.  
**Effective Summer 2021 Effective Summer 2022**

HB 405  Hospitality Foodservice Cost Control  
Fall of every year. Spring of every year. 3(3-0)  P: (HB 265) and ((HB 302 or concurrently) or (ACC 202 or concurrently) or (ACC 230 or concurrently))  P: HB 265  R: Open to juniors or seniors in the Hospitality Business Major.  
Design of food and beverage control systems, emphasis on product purchasing (policies, suppliers, selection and evaluation, determination of quality and quantity, ethics and use of technology), inventory management and issuing systems, revenue control procedures and equipment.  
**Effective Summer 2021 Effective Summer 2022**

HB 411  Hospitality Beverages  
Fall of every year. Spring of every year. 3(3-0)  RB: Must be 21 years of age  R: Open to juniors or seniors in the Hospitality Business Major. Approval of school.  
**Effective Summer 2020 Effective Summer 2022**

HB 411L  Hospitality Beverages Lab  
Fall of every year. Spring of every year. 1(0-2)  P: HB 411 or concurrently  RB: Must be 21 years of age  R: Open to juniors or seniors in the Hospitality Business Major. Approval of school.  
**Effective Fall 2021 Effective Summer 2022**

HB 425  Golf Operations and Management  
Fall of every year. Spring of every year. 3(3-0)  P: HB 420  R: Open to juniors or seniors or graduate students.  
Golf course operations including human resource management, golf course and facility design, equipment, pro shop operations, golf cart fleet and tee sheet management. Golf tournament and outing planning and operations, common golf course legal issues, sustainable golf course maintenance and how the weather impacts the industry. Current trends and strategies in golf facility marketing and advertising. Importance of hospitality in golf operations as well as strategic food and beverage selection.  
**Effective Fall 2021 Effective Summer 2022**

HB 437  Hospitality Revenue Management  
Fall of every year. Spring of every year. 3(3-0)  P: ((HB 273 or concurrently) or (ITM 209 or concurrently)) and (HB 375 or MKT 300 or MKT 327)  P: (HB 273 or ITM 209) and (MKT 327 or MKT 300)  R: Open to juniors or seniors in the Hospitality Business Major or in the Hospitality Business Real Estate Investment Management Minor.  
R: Open to juniors or seniors in the Hospitality Business Major or in the Real Estate Minor.  
Exposure to key management and marketing issues relating to the effective implementation of revenue management. The relationships between the revenue management function and other functions or departments in the hospitality organization. The role and job responsibilities of a revenue manager. The identification of distribution channels that hospitality organizations may use to distribute their inventory.  
**Effective Summer 2020 Effective Summer 2022**
HB 470  Hospitality Asset Management  
Real Estate Asset Management  
Fall of every year. Spring of every year. 3(3-0) P: ((HB 273 or concurrently) or (ITM 209 or concurrently)) and (HB 311 or EB 311 or EB 320) P: (HB 273 or ITM 209) and (FI 320 or FI 311) R:  
Open to juniors or seniors in the Hospitality Business Major or in the Hospitality Real Estate Minor.  
Market forces effecting consumer and business spending applied to the management of real estate assets. Theoretical analyses, practical analyses, and hospitality industry specific cases requiring the use of spreadsheet software and technical writing skills.  
Application of operations expertise to capital investment and disposition decisions. Management contracts, franchise agreements, capital budgets, capital markets, capital structures, labor, market cycles, and brand decisions.  
Effective Fall 2021  Effective Summer 2022

HB 472  Hospitality Financial Modeling  
Real Estate Financial Modeling  
Fall of every year. Spring of every year. 1(1-0) P: ((HB 273 or concurrently) or (ITM 209 or concurrently)) and (HB 311 or EB 311 or EB 320) P: (HB 273 or ITM 209) and (FI 320 or FI 311) R:  
Open to juniors or seniors in the Hospitality Business Major or in the Hospitality Real Estate Minor.  
Design and development of computer spreadsheet-based models to analyze real estate investment financial strategies and valuation issues.  
Effective Fall 2021  Effective Summer 2022

HB 474  Hospitality Valuation  
Real Estate Valuation  
Fall of every year. Spring of every year. 3(3-0) P: ((HB 273 or concurrently) or (ITM 209 or concurrently)) and (HB 311 or EB 311 or EB 320) P: (HB 273 or ITM 209) and (FI 320 or FI 311) R:  
Open to juniors or seniors in the Hospitality Business Major or in the Hospitality Real Estate Minor.  
Open to juniors or seniors in the Hospitality Business Major or in the Real Estate Minor.  
Financial management principles for real estate appraisal and valuation considering perspectives of brokers, consultants, developers, and investors. Theoretical and practical analyses with hospitality industry cases using spreadsheet software and technical writing. Capital markets, capital structures, discounted cash flow, internal rate of return, leverage, and net present value.  
Effective Fall 2021  Effective Summer 2022

HB 482  Advanced Hospitality Finance  
Spring of every year. 3(3-0) P: (HB 273 or ITM 209) and (HB 311 or EB 311 or EB 320) P: (HB 273 or ITM 209) and (FI 320 or FI 311) R:  
Open to juniors or seniors in the Hospitality Business Major or in the Hospitality Real Estate Minor.  
Open to juniors or seniors in the Hospitality Business Major or in the Real Estate Minor.  
Financial analysis regarding the financial viability of hospitality companies. Choosing between investment alternatives, financing, and financial restructuring.  
Effective Spring 2022  Effective Summer 2022

DEPARTMENT OF MARKETING

MKT 351  Retail Management  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) Interdepartmental with Food Industry Management. P: MKT 300 or MKT 327 R: Open to juniors or seniors in the Eli Broad College of Business and The Eli Broad Graduate School of Management or in the Food Industry Management major and open to students in the Food Industry Management Specialization.  
Domestic and international retailing structure, environment, and development. Managerial strategy. Locational, purchasing, organizational, personnel and promotional techniques. Retail budgeting and control. Social and ethical considerations.  
SA: MSC 351  
DELETE COURSE  
Effective Fall 2021
PROGRAM IN MATHEMATICS EDUCATION

MTHE 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 30 credits in all enrollments for this course. A student may earn a maximum of 36 credits in all enrollments for this course. RB: MTHE 926 and MTHE 927 and MTHE 954
  Doctoral dissertation research.
  Request the use of the Pass-No Grade (P-N) system.
  SA: SME 999
Effective Summer 2014 Effective Spring 2022

DEPARTMENT OF MEDIA AND INFORMATION

MI 839  Game and Film Design Studio I
Game and Project Design Studio I
Fall of every year. 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences or approval of department.
  Design principles for the creation of transmedia (games, film, websites, etc.). Design and development studio course focused on the creation of fictional storytelling projects across media projects. Design and development studio course focused on the creation of projects (games, applications, websites, video, etc.) that can take a wide variety of forms, from physical games to virtual reality.
  SA: TC 839
Effective Fall 2017 Effective Summer 2022

MI 846  Game and Film Design Studio II
Game and Project Design Studio II
Spring of every year. 3(3-0) RB: MI 839 R: Open to graduate students in the College of Communication Arts and Sciences or approval of department.
  Design principles for the creation of transmedia (games, film, websites, etc.). Design and development studio course focused on the creation of fictional storytelling projects across media projects. Continuation of design and development studio course focused on the creation of projects (games, applications, websites, video, etc.) that can take a wide variety of forms, from physical games to virtual reality.
Effective Fall 2017 Effective Summer 2022

DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS

MMG 433  Microbial Genomics
Genomics (W)
Spring of every year. 3(3-0) P: (MMG 431) P: MMG 431 RB: (MMG 421 or BMB 461) and CSE 101
Effective Fall 2015 Effective Summer 2022

COLLEGE OF MUSIC

MUS 125  Glee Club, Men and Women
Glee Club
Fall of every year. Spring of every year. 1(0-3) A student may earn a maximum of 10 credits in all enrollments for this course.
  Rehearsal and performance of broad range of choral literature chosen from medieval period to the present.
Effective Fall 2015 Effective Fall 2022
MUS 849  Piano Performance  
Fall of every year. Spring of every year. 1(1-0) A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to graduate students in the College of Music.  
Critique and analysis of individual performances of piano literature in a group setting.  
DELETE COURSE  
Effective Fall 2022

MUS 850A  Piano  
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in piano. R: Open to master's students in the Master of Music in Music Education or in the Master of Music in Music Performance.  
Private instruction in piano.  
DELETE COURSE  
Effective Fall 2022

MUS 851  Voice  
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in voice. R: Open to master's students in the Master of Music in Music Performance.  
Private instruction in voice.  
DELETE COURSE  
Effective Fall 2022

MUS 852A  Violin  
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in violin. R: Open to master's students in the Master of Music in Music Performance.  
Private instruction in violin.  
DELETE COURSE  
Effective Fall 2022

MUS 852B  Viola  
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in viola. R: Open to master's students in the Master of Music in Music Performance.  
Private instruction in viola.  
DELETE COURSE  
Effective Fall 2022

MUS 852C  Cello  
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in cello. R: Open to master's students in the Master of Music in Music Performance.  
Private instruction in cello.  
DELETE COURSE  
Effective Fall 2022

MUS 852D  Double Bass  
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in double bass. R: Open to master's students in the Master of Music in Music Performance.  
Private instruction in double bass.  
DELETE COURSE  
Effective Fall 2022

MUS 852E  Harp  
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course.  
Private instruction in harp  
DELETE COURSE  
Effective Fall 2022
MUS 853A  Flute
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in flute. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in flute.
DELETE COURSE
Effective Fall 2022

MUS 853B  Oboe
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in oboe. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in oboe.
DELETE COURSE
Effective Fall 2022

MUS 853C  Clarinet
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in clarinet. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in clarinet.
DELETE COURSE
Effective Fall 2022

MUS 853D  Saxophone
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in saxophone. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in saxophone.
DELETE COURSE
Effective Fall 2022

MUS 853E  Bassoon
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in bassoon. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in bassoon.
DELETE COURSE
Effective Fall 2022

MUS 854A  Trumpet
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in trumpet. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in trumpet.
DELETE COURSE
Effective Fall 2022

MUS 854B  Horn
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in horn. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in horn.
DELETE COURSE
Effective Fall 2022

MUS 854C  Trombone
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in trombone. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in trombone.
DELETE COURSE
Effective Fall 2022
MUS 854D  Euphonium
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in euphonium. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in euphonium.
DELETE COURSE
Effective Fall 2022

MUS 854E  Tuba
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in tuba. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in tuba.
DELETE COURSE
Effective Fall 2022

MUS 855  Percussion
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course. RB: Emphasis in percussion. R: Open to master's students in the Master of Music in Music Performance.
Private instruction in percussion.
DELETE COURSE
Effective Fall 2022

MUS 856  Chamber Music
Fall of every year. Spring of every year. 1 to 2 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open to graduate students in the College of Music.
Performance of chamber music under faculty direction.
DELETE COURSE
Effective Fall 2022

MUS 896  Master's Recital Performance
Master's Performance
Fall of every year. Spring of every year. Summer of every year. 1 to 10 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open to master's students in the Music Performance major. R: Open to master's students in the Collaborative Piano Major and open to master's students in the Jazz Studies Major.
Directed experience in recital performance in partial fulfillment of Plan B master's degree requirements for master's students in performance. Directed experience in solo, chamber, and ensemble performance in partial fulfillment of Plan B master's degree requirements for master's students in performance.
Request the use of the Pass-No Grade (P-N) system.
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 Effective Fall 2022

MUS 996  Doctoral Recital Performance
Doctoral Performance
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open to doctoral students in the College of Music.
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 Effective Fall 2022
DEPARTMENT OF PHYSICS AND ASTRONOMY

AST 410  Senior Thesis
Fall of every year. Spring of every year. Summer of every year. 1 to 4 credits. A student may earn a maximum of 5 credits in all enrollments for this course. P: (AST 301) and completion of Tier I writing requirement. P: (AST 304 or AST 308) and completion of Tier I writing requirement. Design and execute an original experiment or computation. A written and oral report of the research is required. Capstone course for undergraduate astrophysics majors requiring an in-depth investigation of an astronomical topic. 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 2013 Effective Spring 2022

DEPARTMENT OF PLANT BIOLOGY

PLB 105  Plant Biology
Fall of every year. Spring of every year. Summer of every year. 3(3-0) Plant structure, function, development, genetics, diversity and ecology. Plant structure, function, development, genetics, diversity and ecology. Offered first half of semester. SA: BOT 105 Effective Fall 2014 Effective Spring 2022

DEPARTMENT OF THEATRE

THR 419  Projection Design for Live Performance
Spring of every year. 3(2-2) Interdepartmental with Media and Information. A student may earn a maximum of 6 credits in all enrollments for this course. P: (THR 219) or (THR 337 or MI 337 or MI 341) P: (THR 211 or THR 212 or THR 214 or THR 216 or THR 219) or (MI 337 or DS 341) RB: THR 211 or THR 211L or THR 212 or THR 212L or THR 214 or THR 214L or THR 216 or THR 216L or THR 246L or THR 211 or THR 212 or THR 214 or THR 216 Creating projection performance media through script, technology advancements, and production analysis. Practical application through digital rendering, video production and software exploration. Effective Fall 2017 Effective Summer 2021