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

This report is prepared and distributed for the following purposes:

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

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

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

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

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

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

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

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

1. Delete the curriculum and degree requirements for the Agricultural Technology Certificate in Applied Plant Sciences in the Institute for Agricultural Technology. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Fall 2017. No students are to be readmitted to the program effective Fall 2017. Effective Summer 2018, coding for the program will be discontinued and the program will no longer be available in the Institute for Agricultural Technology. Students who have not met the requirements for the Agricultural Technology Certificate through the Institute for Agricultural Technology prior to Summer 2018 will have to change their certificate.

2. Delete the curriculum and degree requirements for the Agricultural Technology Certificate in Beef Cattle Management in the Institute for Agricultural Technology. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Fall 2017. No students are to be readmitted to the program effective Fall 2017. Effective Summer 2018, coding for the program will be discontinued and the program will no longer be available in the Institute for Agricultural Technology. Students who have not met the requirements for the Agricultural Technology Certificate through the Institute for Agricultural Technology prior to Summer 2018 will have to change their certificate.

3. Delete the curriculum and degree requirements for the Agricultural Technology Certificate in Grounds Management in the Institute for Agricultural Technology. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Fall 2017. No students are to be readmitted to the program effective Fall 2017. Effective Summer 2018, coding for the program will be discontinued and the program will no longer be available in the Institute for Agricultural Technology. Students who have not met the requirements for the Agricultural Technology Certificate through the Institute for Agricultural Technology prior to Summer 2018 will have to change their certificate.

4. Delete the curriculum and degree requirements for the Agricultural Technology Certificate in Landscape and Lawn Management in the Institute for Agricultural Technology. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Fall 2017. No students are to be readmitted to the program effective Fall 2017. Effective Summer 2019, coding for the program will be discontinued and the program will no longer be available in the Institute for Agricultural Technology. Students who have not met the requirements for the Agricultural Technology Certificate through the Institute for Agricultural Technology prior to Summer 2019 will have to change their certificate.
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

5. Delete the curriculum and degree requirements for the **Agricultural Technology Certificate in Swine Management** in the Institute for Agricultural Technology. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Fall 2017. No students are to be readmitted to the program effective Fall 2017. Effective Summer 2018, coding for the program will be discontinued and the program will no longer be available in the Institute for Agricultural Technology. Students who have not met the requirements for the Agricultural Technology Certificate through the Institute for Agricultural Technology prior to Summer 2018 will have to change their certificate.

6. Change the requirements for **Bachelor of Science degree in Environmental Studies and Sustainability** in the Department of Community Sustainability.

a. Under the heading **Requirements for the Bachelor of Science Degree in Environmental Studies and Sustainability** make the following changes:

(1) In item 3, change the total credits from ‘64 to 68’ to ‘64 to 67’.

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

```
EEP 255 Ecological Economics     3
```

Add the following course:

```
EEM 255 Ecological Economics     3
```

(3) In item 3. b. add the following course:

```
CSUS 259 Sustainable Energy and Society    3
```

(4) In item 3. f. change the total credits from ‘9 to 11’ to ‘9 or 10’ and add the following course:

```
CSUS 453 Watershed Planning and Management   3
```

Effective Fall 2018.

7. Change the requirements for the **Bachelor of Science degree in Fisheries and Wildlife** in the Department of Fisheries and Wildlife.

The concentrations in the Bachelor of Science degree in Fisheries and Wildlife are noted on the student’s academic record when the requirements for the degree have been completed.

a. Under the heading **Requirements for the Bachelor of Science Degree in Fisheries and Wildlife** make the following changes:

(1) Delete item 3. a. (2).

(2) Renumber 3. a. (3) to 3. a. (2).

(3) Delete the following note in item 3. a.:

Students pursuing the Preveterinary concentration must complete either group (2) or group (3).

(4) In item 3. c. (2) delete the following course:

```
ENT 319 Introduction to Earth System Science   3
```

(5) In item 3. e. delete the following course:
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

CSUS  325 Study and Practice of Communication for Sustainability (W)  

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

FW  438 Philosophy of Ecology (W)  
PHL  484 Philosophy of Biological Science  

(7) In item 3. g. change the requirement to ‘Complete at least 3 credits from’.

(8) In item 3. h. change ‘ZOL 355’ to ‘IBIO 355’.

(9) In item 3. j. in the Conservation Biology concentration make the following changes:

(a) Change the total credits from ’24 to 26’ to ’27 to 29’.
(b) In item (1) change ‘FW 443’ to ‘PLB 443’ and ‘ZOL 445’ to ‘IBIO 445’.
(c) In item (2) change ‘ZOL 485’ to ‘IBIO 485’.
(d) In item (3) change ‘ZOL 341’ to ‘IBIO 341’.
(e) In item (4) add the following course:

FW  454 Environmental Hydrology for Watershed Management  

(f) In item (5) change ‘EEP 255’ to ‘EEM 255’ and ‘ZOL 446’ to ‘IBIO 446’.
(g) In item (6) change ‘ZOL 360, 365, and 384’ to ‘IBIO 360, 365, and 384’.

(10) In item 3. j. in the Fisheries Biology and Management concentration make the following changes:

(a) In item (4) change ‘ZOL 306’ to ‘IBIO 306’.
(b) In item (6) change ‘ZOL 328 and 341’ to ‘IBIO 328 and 341’ and delete the following course:

ZOL  483 Environmental Physiology (W)  

(11) In item 3. j. in the Wildlife Biology and Management concentration make the following changes:

(a) In item (2) change ‘ZOL 360, 365, and 384 to ‘IBIO 360, 365, and 384’.
(b) In item (4) delete the following course:

PLB  335 Plants Through Time  
(c) In item (5) change ‘ZOL 328 and 341’ to ‘IBIO 328 and 341’ and delete the following course:

ZOL  483 Environmental Physiology (W)  

(12) In item 3. j. in the Water Sciences concentration make the following changes:

(a) In item (4) change ‘ZOL 306’ to ‘IBIO 306’.

(d) In item (6) change ‘ZOL 303, 341, and 353’ to ‘IBIO 303, 341, and 353’ and delete the following course:

ZOL  483 Environmental Physiology (W)  
(13) In item 3. j. in the **Fish and Wildlife Disease Ecology and Management** concentration make the following changes:

(a) Change the total credits from '33 to 35' to '30 or 31'.

(b) In item (1) change the total credits from '24' to '20' and delete the following course:

\[
\text{EPI 390 Disease in Society: Introduction to Epidemiology and Public Health} \quad 4
\]

(c) In item (1) change ‘ZOL 341 and 445’ to ‘IBIO 341 and 445’.

(d) In item (4) delete the following course:

\[
\text{ZOL 316 General Parasitology} \quad 3
\]

(e) In item (4) change ‘ZOL 306, 360, 365, and 384’ to ‘IBIO 306, 360, 365, and 384’.

(14) In item 3. j. in the **Preveterinary** concentration make the following changes:

(a) Change the total credits from ‘38 or 39’ to ‘27 or 28’.

(b) In item (1) change the total credits from ‘31’ to ‘24’ and delete the following courses:

\[
\begin{align*}
\text{MMG 301 Introductory Microbiology} & \quad 3 \\
\text{MMG 302 Introductory Laboratory for General and Allied Health Microbiology} & \quad 1 \\
\text{MMG 409 Eukaryotic Cell Biology} & \quad 3
\end{align*}
\]

(c) Delete items (2) and (3) and add the following new item (2):

One of the following courses (3 or 4 credits):

\[
\begin{align*}
\text{ANS 314 Genetic Improvement of Domestic Animals} & \quad 4 \\
\text{ANS 409 Problems, Controversies and Advancements in Reproduction} & \quad 3 \\
\text{ANS 435 Mammary Physiology} & \quad 4 \\
\text{ANS 445 Equine Exercise Physiology} & \quad 4 \\
\text{ANS 455 Avian Physiology} & \quad 4 \\
\text{BLD 434 Clinical Immunology} & \quad 3 \\
\text{IBIO 341 Fundamental Genetics} & \quad 4 \\
\text{IBIO 408 Histology} & \quad 4 \\
\text{IBIO 425 Cells and Development (W)} & \quad 4 \\
\text{IBIO 450 Cancer Biology (W)} & \quad 3 \\
\text{MMG 301 Introductory Microbiology} & \quad 3 \\
\text{MMG 409 Eukaryotic Cell Biology} & \quad 3 \\
\text{MMG 451 Immunology} & \quad 3 \\
\text{NEU 300 Neurobiology} & \quad 3 \\
\text{PSL 310 Physiology for Pre-Health Professionals} & \quad 4
\end{align*}
\]

Effective Fall 2018.
8. Change the requirements for the **Minor in Conservation, Recreation and Environmental Enforcement** in the Department of Fisheries and Wildlife.

   a. Under the heading **Minor in Conservation, Recreation and Environmental Enforcement** make the following change:

      (1) Under the heading **Environmental Attitudes, Policy and Law** delete the following course:

      ZOL 446 Environmental Issues and Public Policy   3

      Add the following course:

      IBIO 446 Environmental Issues and Public Policy   3

   Effective Fall 2018.

9. Change the requirements for the **Minor in Marine Ecosystem Management** in the Department of Fisheries and Wildlife.

   a. Under the heading **Minor in Marine Ecosystem Management** make the following changes:

      (1) Under the heading **Marine Ecosystem Management** change ‘ZOL 303 and ZOL 353’ to ‘IBIO 303 and IBIO 353’.

      (2) Under the heading **Biodiversity** change ‘ZOL 306’ to ‘IBIO 306’.

      (3) Under the heading **Biodiversity** change the credits of ‘PLB 424’ from ‘4’ to ‘3’.

      (4) Under the heading **Experiential Learning in Marine Ecosystem Management** change ‘ZOL 496 and ZOL 498’ to ‘IBIO 496 and IBIO 498’.

   Effective Fall 2018.

10. Establish a Linked **Bachelor of Science Degree in Construction Management** and **Master of Science Degree in Construction Management** in the Department of Planning, Design and Construction. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its January 25, 2018 meeting. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its February 5, 2018 meeting.

    Per University policy:

    A candidate for a Linked Bachelor's-Master's Degree from Michigan State University may request the application of up to 9 credits toward the master's program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or another postsecondary accredited institution of comparable academic quality. The number of approved credits, not to exceed 9, are applied toward the credit requirement of the master's degree. Some colleges with programs that require more than 30 credits for the master's degree may apply more than 9 credits toward the master's degree but not more than 30% of the total number of credits required for the master's degree. Credits applied to the Linked Bachelor's-Master's Program are not eligible to be applied to any other graduate degree program.

    a. Add the following statement in the Department of Planning, Design and Construction:

    **LINKED BACHELOR’S-MASTER’S DEGREE IN CONSTRUCTION MANAGEMENT**
    Bachelor of Science Degree in Construction Management
    Master of Science Degree in Construction Management

    The department welcomes applications from Michigan State University Construction Management undergraduate students at the end of their junior year. Admission applications must be made after the spring semester of the junior year when CMP 311, 315, and 385 have been completed, for an anticipated Spring graduation. Admission to the program requires a cumulative minimum undergraduate grade-point average of 3.5 or a 3.5 grade-point average in all Construction Management (CMP) courses completed and an approved program of study for the Master of
Science degree in Construction Management at the time of admission, in addition to three letters of recommendation and a personal statement. Admission to the Linked Bachelor’s-Master’s program allows the application of up to 9 credits toward the master’s program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or another postsecondary accredited institution of comparable academic quality. The number of approved credits, not to exceed 9, are applied toward the credit requirement of the master’s degree. Credits applied to the Linked Bachelor’s-Master’s program are not eligible to be applied to any other graduate degree program.

Effective Summer 2018.

11. Change the requirements for the Master of Science degree in Human Nutrition in the Department of Food Science and Human Nutrition. The University Committee on Graduate Studies (UCGS) approved this request at its April 9, 2018 meeting.

   a. Under the heading Requirements for the Master of Science Degree in Human Nutrition replace the entire entry with the following:

      The program is available under either Plan A (with thesis) or Plan B (without thesis). The student must complete at 30 credits.

      The student must complete:

      1. All of the following courses (10 credits):
         HNF 820 Advanced Biochemical Nutrition 3
         HNF 821 Advanced Vitamins and Minerals 3
         HNF 823 Research Methods in Human Nutrition 3
         HNF 892 Nutrition Seminar 1

      2. One of the following courses (3 credits):
         HNF 840 Human Nutrition and Chronic Diseases 3
         HNF 891 Topics in Human Nutrition 3

      3. One of the following courses (1 or 3 credits):
         HNF 824 Nutrition Policies and Programs 1
         Alternative public health or community nutrition course approved by guidance committee 3

      4. A 3-credit graduate level statistics course chosen in consultation with advisor and guidance committee.

      5. A minimum of 5 credits (Plan A) or 11 credits (Plan B) in course work in one or more focus areas selected in consultation with the student’s guidance committee.

      Additional Requirements for Plan A
      1. The following course (6 credits):
         HNF 899 Master’s Thesis Research 6
         Students may not earn more than 10 credits in HNF 899.
      2. Successfully complete a proposal defense and defend the oral and written thesis.

      Additional Requirements for Plan B
      1. The following course (1 to 5 credits):
         HNF 898 Master's Project 1 to 5
         Students may not earn more than 5 credits in HNF 898.
      2. Successfully pass a qualifying examination and complete a final examination or evaluation.

      Effective Fall 2018.
12. Change the requirements for the Doctor of Philosophy degree in Human Nutrition in the Department of Food Science and Human Nutrition. The University Committee on Graduate Studies (UCGS) approved this request at its April 9, 2018 meeting.

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

   The student must:

   1. Complete all of the following courses (10 credits):
      - HNF 820 Advanced Biochemical Nutrition 3
      - HNF 821 Advanced Vitamins and Minerals 3
      - HNF 823 Research Methods in Human Nutrition 3
      - HNF 892 Nutrition Seminar 2
   2. Complete one of the following courses (3 credits):
      - HNF 840 Human Nutrition and Chronic Diseases 3
      - HNF 891 Topics in Human Nutrition 3
   3. Complete one of the following courses (1 or 3 credits):
      - HNF 824 Nutrition Policies and Programs 1
      - Alternative public health or community nutrition course approved by guidance committee 3
   4. Complete a 3-credit graduate level statistics course chosen in consultation with advisor and guidance committee.
   5. Complete a mentored teaching experience through one of the following courses (1 or 2 credits):
      - HNF 894 Human Nutrition Practicum 1
      - ISE 870 Teaching College Science 2
   6. Complete additional course work approved selected in consultation with the student’s guidance committee based on the student’s prior academic background in relation to the selected area of study and research.
   8. Successfully complete a proposal defense and defend the oral and written dissertation.

   Effective Fall 2018.

   **COLLEGE OF ARTS AND LETTERS**

1. Change the requirements for the **Minor in African American and African Studies** in the College of Arts and Letters.

   a. Under the heading **Requirements for the Minor in African American and African Studies** replace the entire entry with the following:

   Student must complete 15 to 18 credits from one of the following tracks:

   **Social Science Track**

   1. Both of the following courses (6 credits):
      - AAAS 100 Race and Community in Local to Global Perspective 3
      - AAAS 300 Survey in Africana Studies 3
   2. Complete a minimum of 3 courses from the following with at least one course from Arts and Humanities and one course from the Social Sciences (9 credits):
      - **Arts and Humanities**
        - AAAS 390 Special Topics in Black/Africana Studies 3
        - ENG 350 Readings in African, African-American, and African Diaspora Literature 3
        - ENG 450 Seminar in African American Literature 3
        - PHL 350 Introduction to Social and Political Philosophy 3
      - **Social Sciences**
        - ANP 330 Race, Ethnicity, and Nation: Anthropological Approaches to Collective Identity 3
        - GEO 418 The Ghetto 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HST 208</td>
<td>Introduction to African History, Culture and Society</td>
<td>4</td>
</tr>
<tr>
<td>HST 310</td>
<td>African American History to 1876</td>
<td>3</td>
</tr>
<tr>
<td>HST 311</td>
<td>African American History since 1876</td>
<td>3</td>
</tr>
<tr>
<td>HST 312</td>
<td>African American Women</td>
<td>3</td>
</tr>
<tr>
<td>HST 364</td>
<td>South Africa: From Shaka Zulu to Mandela</td>
<td>3</td>
</tr>
<tr>
<td>HST 383</td>
<td>The Caribbean</td>
<td>3</td>
</tr>
<tr>
<td>PLS 304</td>
<td>Minority Politics</td>
<td>3</td>
</tr>
<tr>
<td>PLS 351</td>
<td>African Politics</td>
<td>3</td>
</tr>
<tr>
<td>SOC 214</td>
<td>Social Inequality</td>
<td>3</td>
</tr>
<tr>
<td>SOC 375</td>
<td>Urban Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Humanities Track**

1. All of the following courses (12 credits):
   - AAAS 100 Race and Community in Local to Global Perspective 3
   - AAAS 300 Survey in Africana Studies 3
   - AAAS 390 Special Topics in Black/Africana Studies 3
   - AAAS 495 Advanced Research in African American and African Studies 3

2. Complete a minimum of 6 credits from the following:
   - ENG 350 Readings in African, African-American, and African Diaspora Literature 3
   - ENG 450 Seminar in African American Literature 3
   - HST 208 Introduction to African History, Culture and Society 4
   - HST 310 African American History to 1876 3
   - HST 311 African American History since 1876 3
   - HST 312 African American Women 3
   - HST 364 South Africa: From Shaka Zulu to Mandela 3
   - HST 383 The Caribbean 3
   - MC 324B Regional Politics, Cooperation, and Conflict in Sub Saharan Africa 4
   - MC 372 Comparative Black Political Thought 4
   - MC 383 African American Politics 4

Other courses from the Social Science Track may be used to fulfill this requirement.

Effective Fall 2018.

2. Change the requirements for the Bachelor of Arts degree in Global Studies in the Arts and Humanities in the College of Arts and Letters.

   a. Under the heading **Requirements for the Bachelor of Arts Degree in Global Studies in the Arts and Humanities** make the following changes:

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

   All of the following courses (9 credits):
   - GSAH 201 Introduction to Global Studies in the Arts and Humanities 3
   - GSAH 301 Approaches to Global Studies in the Arts and Humanities 3
   - GSAH 450 Senior Seminar in Global Studies in the Arts and Humanities (W) 3

   (2) Replace item 3. b. with the following:

   Complete 12 additional credits in GSAH courses at the 300-level.
   No more than 4 credits in GSAH 391 may be used to fulfill this requirement.

Effective Spring 2019.
3. Change the requirements for the Minor in Global Studies in the Arts and Humanities in the College of Arts and Letters.
   
a. Under the heading Requirements for the Minor in Global Studies in the Arts and Humanities make the following changes:
   
   (1) Replace item 1. With the following:
   The following course (3 credits):
   GSAH 201 Introduction to Global Studies in the Arts and Humanities 3

   (2) Replace item 2. with the following:
   Complete at least 9 credits in GSAH courses at the 300-level. No more than 4 credits in GSAH 391 may be used to fulfill this requirement.

   Effective Spring 2019.

4. Change the requirements for the Bachelor of Arts degree in Apparel and Textiles in the Department of Art, Art History, and Design.
   
a. Under the heading Requirements for the Bachelor of Arts Degree in Apparel and Textiles make the following changes:
   
   (1) In item 3. b. change the total credits from ‘19’ to ‘20 to 22’ and add the following course:
   ATD 493 Internship in Apparel and Textiles 1 to 3

   Effective Fall 2018.

5. Change the requirements for the Bachelor of Fine Arts degree in Apparel and Textile Design in the Department of Art, Art History, and Design.
   
a. Under the heading Requirements for the Bachelor of Arts Degree in Apparel and Textiles make the following changes:
   
   (1) Change item 3. c. to the following:
   Complete three additional Studio Art or Graphic Design courses. Courses used in fulfillment of item 3. a. and 3. b. may not be used to fulfill this requirement (9 credits).

   (2) In item 3. d. change the total credits from ‘19’ to ‘20 to 22’ and add the following course:
   ATD 493 Internship in Apparel and Textiles 1 to 3

   (3) Change item 3. e. to the following:
   Complete five of the following courses (18 to 20 credits):
   ATD 325 Design by Draping 4
   ATD 332 Textile Design 4
   ATD 335 Design Development and Presentation 4
   ATD 423 Design Methods and Approaches 4
   ATD 424 Specialized Design 4
   ATD 427 Knitwear Design 4
   ATD 428 Design Studio 4
   ATD 491A Special Topics in Apparel 3
   ATD 491T Special Topics in Textiles 3

   (4) In item 3. f. add ‘Graphic Design’ as an elective area.

   Effective Fall 2018.
6. Change the requirements for the Bachelor of Fine Arts degree in Art Education in the Department of Art, Art History, and Design. The Teacher Education Council (TEC) approved this request at its April 2, 2018 meeting.

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

   (1) In item 3. a. delete the following course:
       STA 380 Electronic Art 3
       Add the following course:
       STA 345 Ceramics: Wheel Throwing 3
   (2) In item 3. c. delete the following courses:
       STA 360 Graphic Design I: Graphic Form 3
       STA 365 Typography I: Form and Meaning 3
       Add the following courses:
       GD 260 Concepts of Graphic Design 3
       GD 360 Graphic Design I: Graphic Form 3
       GD 365 Typography I: Form and Meaning 3
   (3) In item 3. d. add the following course:
       STA 380 Electronic Art 3
   (4) Replace item 3. e. with the following:
       One of the following courses (3 credits):
       STA 330 Lithography 3
       STA 335 Etching 3
       STA 491B Selected Topics – Printmaking 3
   (5) Change the total credits in item 3. f. from ‘6 to 8’ to ‘6’.
   (6) In item 3. h. delete the following courses:
       HA 252 Introduction to Contemporary Art 4
       HA 474 Aesthetic Theory and Modernism 4
       Add the following courses:
       HA 251 History of Photography 3
       HA 252 Introduction to Contemporary Art 3
       HA 461 Selected Topics in Modern Asian Art 4

Effective Summer 2018.

7. 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) Change the total credits in item 3. a. from ‘38 to 40’.
   (2) In item 3. a. (3) delete the following course:
       HA 200 History of Graphic Design 3
Add the following course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA 251</td>
<td>History of Photography</td>
<td>3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA 451</td>
<td>American Art through 1875</td>
<td>4</td>
</tr>
</tbody>
</table>

Effective Summer 2018.

8. 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 **Admission**, replace items 1. and 2. With the following:

1. have completed GD 360 and GD 365 and;
2. are in their second semester or later at Michigan State University or equivalent standing at another university, and have not yet earned their 30th credit in GD and STA credits combined.

b. Under the heading **Requirements for the Bachelor of Fine Arts Degree in Graphic Design** make the following changes:

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

The University’s Tier II writing requirement for the Graphic Design major is met by completing Graphic Design 492. That course is referenced in item 3. a. (1) below.

(2) Change item 3. a. to the following:

The following Graphic Design and Studio Art courses (66 to 69 credits):

(3) Change item 3. a. (1) to the following:

All of the following courses: Studio Art 110, 112, 113, 114; Graphic Design 160, 360, 365, 460, 492, and 492A (27 credits). The completion of Graphic Design 492 and 492A satisfies the capstone course requirement for the Graphic Design major.

(4) In item 3. a. (3) change the total credits from ‘18 to 20’ to ‘15’ and add Studio Art 463.

(5) Change item 3. a. (4) to the following:

Completion of a service-learning component through enrollment in Graphic Design 493 or 494 (3 credits).

(6) Change item 3. a. (5) to the following:

Graphic Design and Studio Art electives: Additional credits in Graphic Design and Studio Art courses at the 300-400 level as needed to meet the requirement of at least 66, but not more than 69 credits in courses in the major.

(7) Replace item 3. b. (2) with the following:

Graphic Design 200 (3 credits)

Effective Fall 2019.
9. Change the requirements for the **Minor** in **Graphic Design** in the Department of Art, Art History, and Design.

   a. Under the heading **Requirements for the Minor in Graphic Design** make the following changes:

   (1) Delete the following courses:

   - HA 200 History of Graphic Design 3
   - STA 160 Digital Graphic Design: Tools and Methods 3
   - STA 260 Concepts of Graphic Design 3

   Add the following courses:

   - GD 160 Digital Graphic Design: Tools and Methods 3
   - GD 200 History of Graphic Design 3
   - GD 260 Concepts of Graphic Design 3

   Effective Fall 2019.

10. Change the requirements for the **Bachelor of Arts** degree in **Studio Art** in the Department of Art, Art History, and Design.

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

   (1) In item 3. a. change the total credits from '42 to 48' to '41 to 45'.

   (2) Change item 3. a. (2) **Graphic Design** delete Studio Art 360, 365 and add Graphic Design 360, 365.

   All of the following courses: Studio Art 110, 112, 113, 114, 300 or 391, 492, and 492A (18 credits). The completion of Studio Art 492 satisfies the capstone course requirement for the Studio Art major.

   (3) In item 3. a. (3) change the total credits from '8 to 12' to '9'.

   (4) In item 3. a. (3) Ceramics, delete Studio Art 491C.

   (5) In item 3. a. (3) Electronic Art and Intermedia, delete Studio Art 480.

   (6) In item 3. a. (3) Graphic Design delete Studio Art 360, 365, 460, 462, 465, 466, 467, 468, 491E, 494 and add Graphic Design 360, 365, 460, 462, 465, 466, 467, 468, 494.

   (7) In item 3. a. (3) Photography, add Studio Art 384 and 476.

   (8) Change item 3. a. (4) to the following:

   Studio Art electives: Additional credits in Studio Art or Graphic Design courses at the 300-400 level as needed to meet the requirement of at least 41, but not more than 45 credits in courses in the major.

   (9) In item 3. b. (2) delete History of Art 474 and add History of Art 251 and 461.

   Effective Fall 2019.
11. Change the requirements for the Bachelor of Fine Arts degree in Studio Art in the Department of Art, Art History, and Design.

   a. Under the heading Requirements for the Bachelor of Fine Arts Degree in Studio Art make the following changes:

      (1) In item 3. a. change the total credits from '65 to 68' to '66 to 69'.

      (2) Change item 3. a. (1) to the following:

            All of the following courses: Studio Art 110, 112, 113, 114, 300 or 391, 492, and 492A (18 credits). The completion of Studio Art 492 satisfies the capstone course requirement for the Studio Art major.

      (3) In item 3. a. (3) change the total credits from '18 to 22' to '18'.

      (4) In item 3. a. (3) Ceramics, delete Studio Art 491C.

      (5) In item 3. a. (3) Electronic Art and Intermedia, delete Studio Art 480.

      (6) In item 3. a. (3) Photography, add Studio Art 384 and 476.

      (7) In item 3. a. (3) Studio Art Senior Project courses and internships, delete Electronic Art and Intermedia: Studio Art 480S.

      (8) In item 3. a. (3) Studio Art Senior Project courses and internships, Studio Art, delete Studio Art 491S.

      (9) In item 3. a. (4) change the total credits from '6 to 8' to '6'.

      (10) Change item 3. a. (5) to the following:

           Studio Art electives: Additional credits in Studio Art or Graphic Design courses at the 300-400 level as needed to meet the requirement of at least 66, but not more than 69 credits in courses in the major.

      (11) In item 3. b. (2) delete History of Art 474 and add History of Art 251 and 461.

Effective Fall 2019.

12. Change the requirements for the Minor in Women’s and Gender Studies in the Program in Women, Gender and Social Justice.

   a. Under the heading Requirements for the Minor in Women’s and Gender Studies make the following changes:

      (1) In item 2. under Gender, Race, Ethnicity, and History delete the following courses:

           HST  410  History of North American Urbanization  3
           WS  302  Jewish Women's Experiences and Writings  3

      (2) In item 2. under Sexuality and Conflict/Violence delete the following courses:

           COM  391  Topics in Verbal, Intercultural, or Gender Communications  4

      (3) In item 2. under Gender and the Arts and Humanities delete the following courses:

           WS  302  Jewish Women's Experiences and Writings  3

      (4) In item 2. under Gender Applied: Health, Urban, and Public Policy delete the following courses:

           HDFS  405  Work Family  3
HST 410 History of North American Urbanization 3

(5) Add the following optional track for students in the College of Social Science:

The following track is available to students enrolled in a College of Social Science major, to meet the college’s minor requirement for graduation:

1. Both of the following courses (6 credits):
   - PSY 339 Psychology of Women 3
   - WS 201 Introduction to Women’s and Gender Studies 3

2. One of the following courses in the College of Social Science (3 credits):
   - ANP 220 Gender Relations in Comparative Perspective 3
   - ANP 270 Women and Health: Anthropological and International Perspectives 3
   - CJ 425 Women and Criminal Justice 3
   - HST 312 African American Women 3
   - HST 313 Women in the United States to 1869 3
   - HST 314 Women in the United States since 1869 3
   - HST 412 Women Modern European History 3
   - HST 421 Women and Gender in Africa 3
   - SOC 216 Sex and Gender 3

3. Two of the following courses outside the College of Social Science (6 to 8 credits):
   - ENG 153 Introduction to Women Authors 4
   - ENG 353 Readings in Women Writers 3
   - FLM 452 Studies in Film, Gender, and Sexuality 3
   - PHL 356 Philosophical Aspects of Feminism 4
   - REL 432 Modern Muslim Thought (W) 3
   - WS 202 Introduction to Contemporary Feminisms and Gender Theories 3
   - WS 301 Sexual Violence Against Women and Children: Theory and Response 3
   - WS 492 Advanced Seminar in Women’s and Gender Studies (W) 4

Students who are also completing the Minor in Lesbian, Gay, Bisexual, Transgender, Queer, and Sexuality Studies may only use WS 201, 202, or 304 in fulfillment of the requirements for both minors.

Effective Fall 2018.

ELI BROAD COLLEGE OF BUSINESS

1. Change the Admission to the College requirements in The Eli Broad College of Business. The University Committee on Undergraduate Education (UCUE) approved this request at its March 15, 2018 meeting.

   a. Under the heading Admission to the College make the following changes:

      (1) Replace paragraph two with the following:

      Students must apply for college admission by April 1 for a fall semester admission or by November 1 for a spring semester admission.

      (2) Replace item 2. c. with the following:

      One course from the University’s Tier I writing requirement: WRA 101, WRA 195H, LB 133, MC 111, MC 112, or RCAH 111.

Effective Fall 2018.
2. Change the requirements for the **Minor in Entrepreneurship and Innovation** in the Eli Broad College of Business.

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

   (1) Change the introductory note to the following:

   Students must complete 15 credits in courses from the following list. A 2.0 grade-point average must be maintained in courses completed for the minor. Students must also complete two Entrepreneurship and Innovation Experiences Options (E&I Experiences Options). At least one of the E&I Experiences Options must be completed in a course that is not being counted toward the 15 credits required for the minor.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 333</td>
<td>Taxation and Accounting for the Entrepreneur</td>
<td>3</td>
</tr>
<tr>
<td>LB 268</td>
<td>Introduction to Health Care Policy and Organization</td>
<td>3</td>
</tr>
<tr>
<td>MGT 454</td>
<td>Technology Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>MKT 485</td>
<td>Entrepreneurship Practicum</td>
<td>1</td>
</tr>
<tr>
<td>REL 291</td>
<td>Special Topics in Religious Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

   Add the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 214</td>
<td>Social Media and the Start-Up</td>
<td>3</td>
</tr>
<tr>
<td>CSUS 200</td>
<td>Introduction to Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>CSUS 473</td>
<td>Social Entrepreneurship and Community Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>EAD 361</td>
<td>Educational Reform and Policy Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EGR 440</td>
<td>Engineering Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>LB 268</td>
<td>The Business of Medicine</td>
<td>3</td>
</tr>
<tr>
<td>MI 450</td>
<td>Creating Human-Centered Technology (W)</td>
<td>3</td>
</tr>
<tr>
<td>MI 480</td>
<td>Information and Communication Technologies</td>
<td>3</td>
</tr>
<tr>
<td>MI 488</td>
<td>Information and Communication Technology Development Project (W)</td>
<td>3</td>
</tr>
<tr>
<td>PLS 302</td>
<td>Urban Politics</td>
<td>3</td>
</tr>
<tr>
<td>TE 201</td>
<td>Current Issues in Education</td>
<td>3</td>
</tr>
<tr>
<td>UP 201</td>
<td>Introduction to Urban and Regional Planning</td>
<td>4</td>
</tr>
</tbody>
</table>

   (3) In item 3., add the following statement as the last sentence:

   Certain restrictions apply for students completing an E&I Experiences Option to satisfy the requirements of the Minor in Entrepreneurship and Innovation.

   Effective Fall 2018.

3. Change the requirements in the **Minor in International Business** in the Eli Broad College of Business.

   a. Under the heading **Requirements for the Minor in International Business** replace the entire entry with the following:

   The student must complete the requirements specified below with a grade-point average of 2.0 in all courses taken to fulfill requirements 1. and 2.

   1. Two of the following courses (6 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 340</td>
<td>Survey of International Economics</td>
<td>3</td>
</tr>
<tr>
<td>FI 451</td>
<td>International Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>GBL 460</td>
<td>International Business Law and Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>MGT 476</td>
<td>Globalization and Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 415</td>
<td>International Marketing Management</td>
<td>3</td>
</tr>
</tbody>
</table>

   A course taken to fulfill this requirement may not be used to fulfill requirement 2.

   2. Complete an additional 9 credits in courses approved by The Eli Broad College of Business that include international business content. The college’s Undergraduate Academic Service unit maintains an approved list of courses for
satisfying this requirement. Any other courses must be approved by the student’s academic advisor prior to enrollment in the course.

3. Completion of a study abroad program (6 credits) or a pre-approved international internship (credit or non-credit) as approved by The Eli Broad College of Business.

4. Demonstrate competency in a foreign language equivalent to four semesters of study at the university-level. The results of the Michigan State University foreign language placement test will be considered in determining whether or not the student has fulfilled this requirement.

Effective Fall 2018.

4. Establish a Linked Bachelor of Arts Degree in Accounting and Master of Science Degree in Accounting in the Department of Accounting and Information Systems. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its January 25, 2018 meeting. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its February 5, 2018 meeting.

Per University policy:

A candidate for a Linked Bachelor's-Master's Degree from Michigan State University may request the application of up to 9 credits toward the master's program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or another postsecondary accredited institution of comparable academic quality. The number of approved credits, not to exceed 9, are applied toward the credit requirement of the master's degree. Some colleges with programs that require more than 30 credits for the master's degree may apply more than 9 credits toward the master's degree but not more than 30% of the total number of credits required for the master's degree. Credits applied to the Linked Bachelor's-Master's Program are not eligible to be applied to any other graduate degree program.

a. Add the following statement in the Department of Accounting and Information Systems:

**LINKED BACHELOR’S-MASTER’S DEGREE IN ACCOUNTING**

*Bachelor of Arts Degree in Accounting*

*Master of Science Degree in Accounting*

The department welcomes applications from Michigan State University Accounting undergraduate students at the end of their junior year or first semester of the senior year. Admission to the program requires a minimum undergraduate grade-point average of 3.0 and an approved program of study for the Master of Science degree in Accounting at the time of admission. Admission to the Linked Bachelor’s-Master’s program allows the application of up to 9 credits toward the master’s program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or another postsecondary accredited institution of comparable academic quality. The number of approved credits, not to exceed 9, are applied toward the credit requirement of the master’s degree. Credits applied to the Linked Bachelor’s-Master’s program are not eligible to be applied to any other graduate degree program. Students interested in pursuing the Certified Public Accountant (CPA) license must have 150 credit hours of college/university credit to be eligible for certification. This will be considered and built into the student’s study plan.

Effective Fall 2018.

5. Change the requirements for the Master of Science degree in Supply Chain Management in the Department of Supply Chain Management. The University Committee on Graduate Studies (UCGS) will consider this request at its April 9, 2018 meeting.

a. Under the heading Requirements for the Master of Science Degree in Supply Chain Management make the following changes:

1. Change the total credits required from ‘36’ to ‘31’.

2. In item 2., change the total credits from ‘30’ to ‘25’ and delete the following course:

SCM 881 Global Supply Change Management
### PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

**SCM 882** Supply Chain Management Field Study  5  
**SCM 889** Brand Protection for Supply Chain Managers  1.5  
**SCM 890** Independent Study  1.5

Add the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM 881</td>
<td>Global Supply Change Management</td>
<td>2</td>
</tr>
<tr>
<td>SCM 882</td>
<td>Supply Chain Management Field Study</td>
<td>3</td>
</tr>
<tr>
<td>SCM 890</td>
<td>Independent Study</td>
<td>1 to 3</td>
</tr>
</tbody>
</table>

Effective Fall 2018.

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**COLLEGE OF ENGINEERING**

1. Change the requirements in the **Bachelor of Science** degree in **Mechanical Engineering** in the Department of Mechanical Engineering.

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

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

   1. In item 3. a. delete the following course and change the total credits from ‘17’ to ‘13’:

      | Course Code | Course Name            | Credits |
      |-------------|------------------------|---------|
      | CSE 231     | Introduction to Programming I | 4       |

   2. In item 3. b. delete the following courses:

      | Course Code | Course Name            | Credits |
      |-------------|------------------------|---------|
      | ME 371      | Mechanical Design I    | 3       |
      | ME 471      | Mechanical Design II   | 3       |

   Add the following courses:

      | Course Code | Course Name                        | Credits |
      |-------------|------------------------------------|---------|
      | ME 370      | Mechanical Design and Manufacturing I | 3       |
      | ME 470      | Mechanical Design and Manufacturing II | 3       |

   3. In item 3. c. delete the following course:

      | Course Code | Course Name                        | Credits |
      |-------------|------------------------------------|---------|
      | ME 456      | Mechatronic System Design          | 3       |

   Add the following courses:

      | Course Code | Course Name                        | Credits |
      |-------------|------------------------------------|---------|
      | ME 413      | Cryogenic-Thermal Systems          | 3       |
      | ME 414      | Mechanical Design of Cryogenic Systems | 3       |
      | ME 441      | Aerodynamics and Aircraft Performance | 3       |

   4. In item 3. d. delete the following course:

      | Course Code | Course Name                        | Credits |
      |-------------|------------------------------------|---------|
      | ME 456      | Mechatronic System Design          | 3       |

   Add the following courses:

      | Course Code | Course Name                        | Credits |
      |-------------|------------------------------------|---------|
      | ME 414      | Mechanical Design of Cryogenic Systems | 3       |
      | ME 478      | Product Development                | 3       |

   5. Add the following two concentrations:
**Concentration in Aerospace Engineering**

A concentration in Aerospace Engineering is available to, but not required of, any student enrolled in the Bachelor of Science degree in Mechanical Engineering. Completing the Bachelor of Science degree in Mechanical Engineering with a concentration in Aerospace Engineering may require more than 128 credits. The concentration will be noted on the student's transcript.

**Aerospace Engineering**

A mechanical engineering degree with the aerospace engineering concentration recognizes the expertise of students in subjects related to aerospace applications and to the aerospace industry, which provides many career opportunities for mechanical engineering graduates. Students who meet the requirements of this concentration will have expertise in aerodynamics, propulsion and structures, supplemented by other strengths in the core Mechanical Engineering degree program. To complete a Bachelor of Science degree in mechanical engineering with an aerospace engineering concentration, students must complete requirements 1., 2., 3.a., 3.b., and 3.d. above and the following:

**CREDITS**

All of the following courses (9 credits):

- ME 440  Aerospace Propulsion 3
- ME 441  Aerodynamics and Aircraft Performance 3
- ME 475  Computer Aided Design of Structures 3

One of the following courses (3 credits):

- ME 422  Introduction to Combustion 3
- ME 426  Introduction to Composite Materials 3
- ME 433  Introduction to Computational Fluid Dynamics 3
- ME 442  Turbomachinery 3
- ME 464  Intermediate Dynamics 3

**Concentration in Cryogenic Engineering**

A concentration in Cryogenic Engineering is available to, but not required of, any student enrolled in the Bachelor of Science degree in Mechanical Engineering. Completing the Bachelor of Science degree in Mechanical Engineering with a concentration in Cryogenic Engineering may require more than 128 credits. The concentration will be noted on the student's transcript.

**Cryogenic Engineering**

A mechanical engineering degree with the cryogenic engineering concentration recognizes the expertise of students in thermal and mechanical analysis and design techniques as applied to cryogenic engineering applications. To complete a Bachelor of Science degree in mechanical engineering with a cryogenic engineering concentration, students must complete requirements 1., 2., 3.a., 3.b., and 3.d. above and the following courses (12 credits):

**CREDITS**

All of the following courses (12 credits):

- ME 413  Cryogenic-Thermal Systems 3
- ME 414  Mechanical Design of Cryogenic Systems 3
- ME 416  Computer Assisted Design of Thermal Systems 3
- ME 442  Turbomachinery 3

Under the heading **Biomedical Engineering** concentration make the following change:

Delete the following course:

- BE 445  Biosensors for Medical Diagnostics 3

Add the following course:

- BE 444  Biosensors for Medical Diagnostics 3
(7) Under the heading **Manufacturing Engineering** concentration make the following changes:

Delete the following course:

- EC 210 Economics Principles Using Calculus 3

Add the following requirement:

One of the following courses (3 credits):
- ACC 230 Survey of Accounting Concepts 3
- EC 201 Introduction to Microeconomics 3

Effective Fall 2018.

**COLLEGE OF LAW**

1. Change the requirements for the **Juris Doctor** degree in the Michigan State University College of Law. The University Committee on Graduate Studies (UCGS) approved this request at its April 9, 2018 meeting.

   a. Under the heading **Juris Doctor** make the following changes:

      (1) In item 1. of the required courses delete the following courses:

         - LAW 530F Contract Negotiation 1
         - LAW 530K Foundations of Law 1

      Add the following courses:

         - LAW 530K Foundations of Law 0
         - LAW 530U First-Year Advanced Topics and Skills 2

   Effective Fall 2018.

**COLLEGE OF NATURAL SCIENCE**

1. Change the requirements for the **Bachelor of Science** degree in **Biochemistry and Molecular Biology** in the Department of Biochemistry and Molecular Biology.

   a. Under the heading **Requirements for the Bachelor of Science Degree in Biochemistry and Molecular Biology** make the following changes:

      (1) In item 3. a. change the total credits from '60 to 68' to '64 to 70'.

      (2) In item 3. a. (1) change the credits from '7' to '11' and add the following course:

         CMSE 201 Introduction to Computational Modeling 4

      (3) In item 3. a. (8) reletter item (c) to item (d) and add the following new item (c):

         - PHY 241 Physics for Cellular and Molecular Biologists I 4
         - PHY 242 Physics for Cellular and Molecular Biologists II 4

   Effective Summer 2018.
2. Change the requirements for the Bachelor of Science degree in Biochemistry and Molecular Biology/Biotechnology in the Department of Biochemistry and Molecular Biology.

a. Under the heading Requirements for the Bachelor of Science Degree in Biochemistry and Molecular Biology/Biotechnology make the following changes:

(1) In item 3. a. change the total credits from '65 to 75' to '66 to 73'.

(2) In item 3. a. (1) change the credits from '7' to '11' and add the following course:

CMSE 201 Introduction to Computational Modeling 4

(3) Delete item 3. a. (6):

One of the following courses (3 or 4 credits):

CSE 131 Technical Computing and Problem Solving 3
CSE 231 Introduction to Programming I 4

(4) Renumber items 3. a. (7), (8), (9), (10), (11), and (12) respectively.

(5) In item 3. a. (8) reletter item (c) to (d) and add the following (c):

(c) PHY 241 Physics for Cellular and Molecular Biologists I 4
PHY 242 Physics for Cellular and Molecular Biologists II 4

Effective Summer 2018.

3. Delete the curriculum and degree requirements for the Bachelor of Science degree in Computational Chemistry in the Department of Chemistry. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Summer 2013. No students are to be readmitted to the program effective Summer 2018. Effective Spring 2021, coding for the program will be discontinued and the program will no longer be available in the Department of Chemistry. Students who have not met the requirements for the Bachelor of Science degree in Computational Chemistry through the Department of Chemistry prior to Spring 2021 will have to change their major.

4. Change the requirements for the Bachelor of Science degree in Astrophysics in the Department of Physics and Astronomy.

a. Under the heading Requirements for the Bachelor of Science Degree in Astrophysics replace the entire entry with the following:

a. The following courses outside the Department of Physics and Astronomy (33 to 39 credits):

(1) One of the following courses (3 to 5 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS 161</td>
<td>Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BS 162</td>
<td>Organismal and Population Biology</td>
<td>3</td>
</tr>
<tr>
<td>BS 181H</td>
<td>Honors Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BS 182H</td>
<td>Honors Organismal and Population Biology</td>
<td>3</td>
</tr>
<tr>
<td>ENT 205</td>
<td>Pests, Society and Environment</td>
<td>3</td>
</tr>
<tr>
<td>IBIO 150</td>
<td>Integrating Biology: from DNA to Populations</td>
<td>3</td>
</tr>
<tr>
<td>LB 144</td>
<td>Biology I: Organismal Biology</td>
<td>4</td>
</tr>
<tr>
<td>LB 145</td>
<td>Biology II: Cellular and Molecular Biology</td>
<td>5</td>
</tr>
<tr>
<td>MMG 141</td>
<td>Introductory Human Genetics</td>
<td>3</td>
</tr>
<tr>
<td>MMG 201</td>
<td>Fundamentals of Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>PLB 105</td>
<td>Plant Biology</td>
<td>3</td>
</tr>
<tr>
<td>PSL 250</td>
<td>Introductory Physiology</td>
<td>4</td>
</tr>
</tbody>
</table>

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

(a) CEM 141 General Chemistry 4
CEM 142 General and Inorganic Chemistry 3
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

CEM 161 Chemistry Laboratory I 1
(b) CEM 151 General and Descriptive Chemistry 4
CEM 152 Principles of Chemistry 3
CEM 161 Chemistry Laboratory I 1
(c) CEM 181H Honors Chemistry I 4
CEM 182H Honors Chemistry II 4
CEM 185H Honors Chemistry Laboratory I 2
(d) LB 171 Principles of Chemistry I 4
LB 171L Introductory Chemistry Laboratory I 1
LB 172 Principles of Chemistry II 3

(3) One of the following groups of Mathematics courses (12 to 14 credits):
(a) MTH 132 Calculus I 3
MTH 133 Calculus II 4
MTH 234 Multivariable Calculus 4
MTH 235 Differential Equations 3
(b) MTH 152H Honors Calculus I 3
MTH 153H Honors Calculus II 4
MTH 254H Honors Multivariable Calculus 4
MTH 235 Differential Equations 3
or
MTH 340 Ordinary Differential Equations I 3
(c) LB 118 Calculus I 4
LB 119 Calculus II 4
LB 220 Calculus III 4
MTH 235 Differential Equations 3
or
MTH 340 Ordinary Differential Equations I 3

(4) The following course (4 credits):
CMSE 201 Introduction to Computational Modeling 4

b. The following courses in the Department of Physics and Astronomy:
(1) All of the following Astronomy courses (16 credits):
AST 207 The Science of Astronomy 3
AST 208 Planets and Telescopes 3
AST 304 Stars 3
AST 308 Galaxies and Cosmology 3
AST 410 Senior Thesis 4
Students must enroll for a total of 4 credits of AST 410. This is normally split over two semesters.

(2) One of the following groups of Physics courses (8 to 10 credits):
(a) 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
(b) PHY 193H Honors Physics I- Mechanics 4
PHY 294H Honors Physics II - Electromagnetism 4
PHY 191 Physics Lab for Scientists I 1
PHY 192 Physics Lab for Scientists II 1
(c) LB 273 Physics I 4
LB 274 Physics II 4

(3) All of the following courses (15 credits):
PHY 215 Thermodynamics and Modern Physics 3
PHY 321 Classical Mechanics I 3
PHY 410 Thermal and Statistical Physics 3
PHY 471 Quantum Physics I 3
PHY 481 Electricity and Magnetism I 3

Effective Fall 2018.
5. Change the requirements for the Bachelor of Science degree in Physics in the Department of Physics and Astronomy. The Teacher Education Council (TEC) approved this request at its April 2, 2018 meeting.

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

(1) In item 3. a. change the total credits from ’23 to 28’ to ’33 to 39’ and add the following courses:

- BS 181H Honors Cell and Molecular Biology 3
- BS 182H Honors Organismal and Population Biology 3
- IBIO 150 Integrating Biology: From DNA to Populations 3
- LB 144 Biology I: Organismal Biology 4
- LB 145 Biology II: Cellular and Molecular Biology 5
- MMG 141 Introductory Human Genetics 3

Delete the following course:

- ZOL 141 Introductory Human Genetics 3

(2) In item 3. a. (3) (c) add the following courses:

- MTH 235 Differential Equations 3
  or
- MTH 340 Ordinary Differential Equations I 3

(3) Renumber item 3. a. (4) to 3. a. (5) and add the following item 3. a. (4):

The following course (4 credits):

- CMSE 201 Introduction to Computational Modeling 4

Effective Fall 2018.

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**COLLEGE OF NURSING**

1. Establish a **Graduate Certificate** in **Teaching in Nursing** in the College of Nursing. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its February 5, 2018 meeting.

The Graduate Certificate in Teaching in Nursing is a Type 2 graduate certificate and will appear on the transcript as “Graduate Certificate Program in Teaching in Nursing”.

a. **Background Information:**

National League for Nursing (NLN) and American Association of Colleges of Nursing (AACN) recognize the need for nurse educators to be prepared to teach in an academic environment. In addition, a growing number of academic programs and specialty practices are requiring educators to be certified as nurse educators as a condition of employment. Completion of the certificate program will prepare nurses who are qualified academically and experientially to fill nurse educator vacancies nationally. The courses currently are offered as part of the College of Nursing Clinical Nurse Specialist Master of Science in Nursing program, as a partial requirement for the Certificate in College Teaching program at MSU, and Nurse Faculty loan program. Graduates are qualified to sit for a national certification exam as an Academic Nurse Educator.

b. **Academic Programs Catalog Text:**

The Graduate Certificate in Teaching in Nursing program is designed to prepare graduate and post-graduate nurses with nurse educator competencies in preparation for teaching in clinical and academic settings. Students will develop skills in facilitating learning, curriculum development, educational technology, and assessment and evaluation strategies. The program includes a total of
90 hours of student teaching under the direct supervision of a College of Nursing preceptor. Graduates meet the requirements to sit for the National League for Nursing (NLN) Academic Nurse Educator certification exams. The Graduate Certificate in Teaching in Nursing is available only online.

**Admission**

To be considered for admission to the Graduate Certificate in Teaching in Nursing an applicant must:

1. Be enrolled in an MSU College of Nursing graduate program; an accredited graduate nursing program; or graduated from an accredited graduate program in nursing with a minimum 3.0 grade-point average on a 4.0 scale.
2. Have completed a bachelor's in nursing degree from an accredited program with a minimum 3.0 grade-point average on a 4.0 scale.
3. Submit the university application form and fee if not currently enrolled at MSU.
4. Submit the admission application for the certificate program and CV/resume on the College of Nursing Web site.
5. Provide transcripts from all previous institutions of higher education.
6. Complete a test of English language proficiency if English is not the first language with a minimum average score of 550 with no subscore below 52 (paper version) or 79 with no subscore below 17 (internet based test). Equivalent scores on the MSU English Language Center Test may be submitted. If using the International English Language Testing System (IELTS), the minimum average score must be 6.5.
7. Hold an unrestricted RN license in the applicant’s state or country.
8. Complete an admission interview.

**Requirements for the Graduate Certificate in Teaching in Nursing**

Students must complete the following courses (9 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 861</td>
<td>Curriculum Design in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NUR 866</td>
<td>Academic and Clinical Teaching Internship</td>
<td>3</td>
</tr>
<tr>
<td>NUR 868</td>
<td>Topics in Nursing Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Fall 2018.

**COLLEGE OF SOCIAL SCIENCE**

1. Change the requirements for the **Bachelor of Arts** degree in **Economics**.
   a. Under the heading **Requirements for the Bachelor of Arts Degree in Economics** make the following changes:

   (1) In item 1., paragraph three, add the following course as available to fulfill the Tier II writing requirement:

   Economics 404.

   (2) In item 3. change the total credits required for the major from ‘33’ to ‘30’.

   (3) In item 3. c. add the following course:

   EC 404 Behavioral Economics (W) 3

   (4) In item 3. e. add the following note:

   The course used to fulfill this requirement may also be used to fulfill the College of Social Science STEM requirement.

   (5) In item 3. f. delete the following course:
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

CSE 131  Technical Computing and Problem Solving  3

Add the following course:

CMSE 201  Introduction to Computational Modeling  4

Add the following note:

The course used to fulfill this requirement may also be used to fulfill the College of Social Science STEM requirement.

Effective Fall 2018.

2. Change the requirements for the Bachelor of Science degree in Economics.

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

(1) In item 1., paragraph three, add the following course as available to fulfill the Tier II writing requirement:

Economics 404.

(2) In item 2. delete the entry referencing the required 15 credits of the College of Social Science NATURAL SCIENCE REQUIREMENT.

(3) In item 3. b. add the following note:

The course used to fulfill this requirement may not be used to fulfill requirement 3. c. below.

(4) In item 3. c. add the following course:

EC 404  Behavioral Economics (W)  3

(5) Add the following items 3. g., 3. h., and 3. i.

g. One of the following courses (3 or 4 credits):

MTH 133  Calculus II  4
MTH 153H  Honors Calculus II  3

The course used to fulfill this requirement may also be used to fulfill the College of Social Science STEM requirement.

h. One of the following courses (3 credits):

STT 441  Probability and Statistics I: Probability  3
STT 442  Probability and Statistics II: Statistics  3
STT 461  Computations in Probability and Statistics  3
STT 471  Statistics for Quality and Productivity  3

The course used to fulfill this requirement may also be used to fulfill the College of Social Science STEM requirement.

i. A minimum of 8 credits from the following courses:

CSE 231  Introduction to Programming I  4
CMSE 201  Introduction to Computational Modeling  4
MTH 234  Multivariable Calculus  4
MTH 235  Differential Equations  3
MTH 254H  Honors Multivariable Calculus  3
MTH 255H  Honors Differential Equations  3
MTH 299  Transitions  4
MTH 309  Linear Algebra I  3
MTH 310  Abstract Algebra I and Number Theory  3
MTH 314  Matrix Algebra with Applications  3
MTH 320  Analysis I  3
MTH 340  Ordinary Differential Equations I  3
Students may count only one of CSE 231 or CMSE 202 in this requirement. The courses used to fulfill this requirement may also be used to fulfill the College of Social Science STEM requirement.

Effective Fall 2018.

COLLEGE OF VETERINARY MEDICINE

1. Change the requirements for the Doctor of Veterinary Medicine degree in Veterinary Medicine in the College of Veterinary Medicine. The University Committee on Graduate Studies (UCGS) approved this request at its April 9, 2018 meeting.

a. Under the heading Admission to the Professional Program in Veterinary Medicine replace the entire entry with the following:

The College of Veterinary Medicine strives to select individuals with the academic ability, motivation, emotional intelligence, and social competence to succeed as veterinary students and future veterinarians. Student diversity is promoted to help meet the needs of a diverse society. A wide variety of experiences are represented in each entering class, with academic backgrounds including the sciences, the arts and humanities, and various advanced degrees.

A new class of students begins the four-year professional program each fall semester. Applications for admission and related materials must be received by the deadline as specified by the Veterinary Medical College Application Service (VMCAS).

Factors considered by the Admissions Committee in determining an applicant’s relative competitive position are:

1. Academic performance: A minimum last-3-semester grade-point average (GPA) in combination with a minimum prerequisite GPA of 3.0 is required for an application to receive review.
2. File review of nonacademic experiences and attributes fitting to the values of the College.
3. Multiple Mini Intervies (MMIs) by faculty, staff, alumni, and other vested individuals trained to assess for the qualities considered important for positive professional outcomes (by invitation).

Applications, regular or transfer, are reviewed by the Committee on Student Admissions. Final selection of applicants is based on a combination of academic performance, evidence of significant accomplishments in nonacademic areas, and performance in MMIs.

Applicants are considered for admission in the following order of priority:

1. Residents of the state of Michigan, as defined by Michigan State University. (Since Michigan State University is a public, tax-assisted institution, admission priority is granted to residents of Michigan.)
2. Residents of states other than Michigan, including U.S. Territories and Trust Possessions.
3. All others.

Requirements to be completed by students prior to enrollment:

All prerequisite courses must be completed by the spring semester of the year of matriculation with a minimum grade of 2.0 in each course. Fifty percent of the science prerequisite courses must be complete at the time of application, with a minimum grade of 2.0 in each course.

Science Prerequisite Courses

College Algebra and Trigonometry (or precalculus or calculus)
Physics I and II with laboratories
Chemistry I with laboratory
Introductory Biology I and II with laboratories
Organic Chemistry I and II with laboratory
Biochemistry
Advanced Biology Elective (3 credit minimum), such as Cell Biology, Physiology,
Neurobiology, Immunology, Genetics, Microbiology, or Histology

Advanced Placement (AP) credits are accepted for College Algebra and Trigonometry, Physics I and II, Chemistry I, and Introductory Biology I and II.

General Education Requirements

**Arts and Humanities** - two courses that must include two of the following subject areas: history, literature, art/music/theatre history or appreciation, philosophy, and religion

**Social Science** - two courses that must include two of the following subject areas: cultural anthropology, economics, human geography, political science, psychology, and sociology

**English** - one course (3 semester credits) of English composition

Advanced Placement (AP) credits are accepted to fulfill any of these requirements.

b. Delete the **PRODUCTION MEDICINE SCHOLARS ADMISSION PATHWAY**.

c. Under the heading **Requirements for the Doctor of Veterinary Medicine Degree in Veterinary Medicine** replace the entire entry with the following:

**VETERINARY MEDICINE (Year 1)**

**SEMESTER 1 (Fall) (19 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM 500</td>
<td>Veterinary Science I</td>
<td>2</td>
</tr>
<tr>
<td>VM 501</td>
<td>One Health I</td>
<td>1</td>
</tr>
<tr>
<td>VM 502</td>
<td>Veterinary Doctoring I</td>
<td>1</td>
</tr>
<tr>
<td>VM 503</td>
<td>Veterinary Career and Practice Management I</td>
<td>1</td>
</tr>
<tr>
<td>VM 515</td>
<td>Animals in Society</td>
<td>2</td>
</tr>
<tr>
<td>VM 516</td>
<td>Musculoskeletal System I</td>
<td>3</td>
</tr>
<tr>
<td>VM 517</td>
<td>Nervous System I</td>
<td>3</td>
</tr>
<tr>
<td>VM 518</td>
<td>Cardiovascular System I</td>
<td>3</td>
</tr>
<tr>
<td>VM 519</td>
<td>Cutaneous System I</td>
<td>3</td>
</tr>
</tbody>
</table>

**SEMESTER 2 (Spring) (19 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM 504</td>
<td>One Health II</td>
<td>1</td>
</tr>
<tr>
<td>VM 505</td>
<td>Veterinary Doctoring II</td>
<td>1</td>
</tr>
<tr>
<td>VM 506</td>
<td>Veterinary Career and Practice Management II</td>
<td>1</td>
</tr>
<tr>
<td>VM 520</td>
<td>Respiratory System I</td>
<td>3</td>
</tr>
<tr>
<td>VM 523</td>
<td>Immunologic and Hematologic Systems I</td>
<td>3</td>
</tr>
<tr>
<td>VM 525</td>
<td>Digestive System I</td>
<td>3</td>
</tr>
<tr>
<td>VM 527</td>
<td>Endocrine System I</td>
<td>3</td>
</tr>
<tr>
<td>VM 528</td>
<td>Reproductive System I</td>
<td>2</td>
</tr>
<tr>
<td>VM 529</td>
<td>Urinary System I</td>
<td>2</td>
</tr>
</tbody>
</table>

**VETERINARY MEDICINE (Year 2)**

**SEMESTER 3 (Fall) (19 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM 507</td>
<td>One Health III</td>
<td>1</td>
</tr>
<tr>
<td>VM 508</td>
<td>Veterinary Doctoring III</td>
<td>1</td>
</tr>
<tr>
<td>VM 509</td>
<td>Veterinary Career and Practice Management III</td>
<td>1</td>
</tr>
<tr>
<td>VM 530</td>
<td>Veterinary Science II</td>
<td>4</td>
</tr>
<tr>
<td>VM 531</td>
<td>Immunologic and Hematologic Systems II</td>
<td>3</td>
</tr>
<tr>
<td>VM 534</td>
<td>Cutaneous System II</td>
<td>3</td>
</tr>
<tr>
<td>VM 535</td>
<td>Reproductive System II</td>
<td>3</td>
</tr>
<tr>
<td>VM 536</td>
<td>Respiratory System II</td>
<td>3</td>
</tr>
</tbody>
</table>

**SEMESTER 4 (Spring), (19 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM 510</td>
<td>One Health IV</td>
<td>1</td>
</tr>
<tr>
<td>VM 512</td>
<td>Veterinary Doctoring IV</td>
<td>1</td>
</tr>
<tr>
<td>VM 537</td>
<td>Veterinary Career and Practice Management IV</td>
<td>1</td>
</tr>
<tr>
<td>VM 565</td>
<td>Cardiovascular System II</td>
<td>2</td>
</tr>
<tr>
<td>VM 568</td>
<td>Urinary System II</td>
<td>3</td>
</tr>
<tr>
<td>VM 569</td>
<td>Musculoskeletal System II</td>
<td>2</td>
</tr>
</tbody>
</table>
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

VETERINARY MEDICINE (Year 3)

SEMESTER 5 (Fall) (19 credits)
- VM 571 Nervous System II 3
- VM 575 Digestive System II 3
- VM 577 Endocrine System II 3

SEMESTER 6 (Spring) (17 credits)
- VM 580 Surgical and Anesthetic Skills 3

Complete 9 credits of required or elective clerkships.

VETERINARY MEDICINE (Year 4)

SEMESTERS 7 (Summer), 8 (Fall), and 9 (Spring)

Students will be required to complete 30 required clerkship credits and an additional 15 credits of elective clerkship credits. Students complete their 9-credits of Preceptorship during Year 4 through enrollment in VM 611. The 9 credits in VM 611 must be completed in three consecutive, separate enrollments in consultation with the student’s advisor. Satisfactory completion of semesters one through six of the professional curriculum is required for enrollment in any of the listed clerkships.

Effective Fall 2018.

2. Change the requirements for the Master of Science degree in Integrative Pharmacology in the Department of Pharmacology and Toxicology. The University Committee on Graduate Studies (UCGS) approved this request at its April 9, 2018 meeting.

a. Under the heading Requirements for the Master of Science Degree in Integrative Pharmacology make the following changes:

(1) Replace the introductory statement with the following:

The student must complete at least 31 credits under Plan B (without thesis). Students may not earn more than 9 credits at the 400-level.

(2) Replace item 1. with the following:

All of the following courses (16 to 19 credits):
- PHM 819 Principles of Drug-Tissue Interactions 2
- PHM 822 Academic and Research Integrity 1
- PHM 830 Experimental Design and Data Analysis 3
- PHM 832 Applied Integrative Pharmacology Laboratory 3
- PHM 850 Communications for Biomedical Researchers 2
- PHM 895 Applied Project in Integrative Pharmacology 3 to 6

or
- PHM 982 Capstone Literature Review 2

(3) In item 2. Science electives, change the credits from '12 to 15’ to ‘as needed to total 31 credits for the degree) and add the following courses:

- HM 803 Epidemiology and Public Health 3
- HM 806 Environmental Factors of Health 3
- HM 833 Introduction to Pharmaceutical Counterfeiting and Public Health 3
- PHM 431 Pharmacology of Drug Addiction 3
- PHM 461 Tropical Medicine Pharmacology 2
- PHM 483 Antimicrobial Chemotherapy 3
(4) In item 3. Professional electives, delete the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHM 659</td>
<td>Regulatory Affairs and Project Management in Clinical Research</td>
<td>3</td>
</tr>
<tr>
<td>PHM 850</td>
<td>Communications for Biomedical Researchers</td>
<td>2</td>
</tr>
</tbody>
</table>

Effective Fall 2018.

3. Change the requirements for the Master of Science degree in Pharmacology and Toxicology in the Department of Pharmacology and Toxicology. The University Committee on Graduate Studies (UCGS) approved this request at its April 9, 2018 meeting.

a. Under the heading Requirements for the Master of Science Degree in Pharmacology and Toxicology make the following changes:

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHM 980</td>
<td>Problems</td>
<td>2</td>
</tr>
</tbody>
</table>

Add the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHM 850</td>
<td>Communications for Scientists</td>
<td>2</td>
</tr>
<tr>
<td>PHM 982</td>
<td>Capstone Literature Review</td>
<td>2</td>
</tr>
</tbody>
</table>

Change the total credits for item 1. from ‘8’ to ‘10’.

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHM 461</td>
<td>Tropical Medicine Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>PHM 483</td>
<td>Antimicrobial Chemotherapy</td>
<td>3</td>
</tr>
</tbody>
</table>

Change the total credits for item 2. from ‘24’ to ‘21’.

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHM 850</td>
<td>Communications for Biomedical Researchers</td>
<td>2</td>
</tr>
</tbody>
</table>

(4) In the Pharmacology concentration delete items 2. and 3. and replace with the following:

2. Other elective science courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLD 830</td>
<td>Concepts in Molecular Biology</td>
<td>2</td>
</tr>
<tr>
<td>HM 803</td>
<td>Epidemiology and Public Health</td>
<td>3</td>
</tr>
<tr>
<td>HM 806</td>
<td>Environmental Factors of Health</td>
<td>3</td>
</tr>
<tr>
<td>PHM 450</td>
<td>Introduction to Chemical Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>PHM 461</td>
<td>Tropical Medicine Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>PHM 483</td>
<td>Antimicrobial Chemotherapy</td>
<td>3</td>
</tr>
<tr>
<td>PHM 817</td>
<td>Neurotoxicology</td>
<td>2</td>
</tr>
<tr>
<td>PHM 828</td>
<td>Concepts of Carcinogenesis</td>
<td>2</td>
</tr>
<tr>
<td>PHM 831</td>
<td>Endocrine Pharmacology and Toxicology</td>
<td>2</td>
</tr>
<tr>
<td>PHM 833</td>
<td>Gastro-Intestinal and Liver Pharmacology and Toxicology</td>
<td>2</td>
</tr>
<tr>
<td>PHM 840</td>
<td>Safety Pharmacology</td>
<td>2</td>
</tr>
<tr>
<td>PHM 841</td>
<td>Cellular and Molecular Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>VM 812</td>
<td>Food Safety Toxicology</td>
<td>3</td>
</tr>
</tbody>
</table>

3. Professional Elective Courses (not more than 5 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLD 842</td>
<td>Managing Biomedical Laboratory Operations</td>
<td>2</td>
</tr>
<tr>
<td>PHM 851</td>
<td>Intellectual Property and Patent Law for Biomedical Sciences</td>
<td>2</td>
</tr>
<tr>
<td>PHM 854</td>
<td>Leadership and Team-Building for Biomedical Research</td>
<td>2</td>
</tr>
<tr>
<td>PHM 855</td>
<td>The Business of Biomedical Research</td>
<td>2</td>
</tr>
</tbody>
</table>
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

In the **Toxicology** concentration delete items 2. and 3. and replace with the following:

2. Other elective science courses:
   - BLD 830  Concepts in Molecular Biology  2
   - HM 803  Epidemiology and Public Health  3
   - HM 833  Introduction to Pharmaceutical Counterfeiting and Public Health  3
   - PHM 430  Human Pharmacology  3
   - PHM 431  Pharmacology of Drug Addiction  3
   - PHM 461  Tropical Medicine Pharmacology  2
   - PHM 483  Antimicrobial Chemotherapy  3
   - PHM 813  Cardiovascular Pharmacology and Toxicology  3
   - PHM 829  Neuropharmacology  2
   - PHM 831  Endocrine Pharmacology and Toxicology  2
   - PHM 833  Gastro-Intestinal and Liver Pharmacology and Toxicology  2
   - PHM 834  Respiratory Pharmacology  2
   - PHM 835  Biopharmaceuticals: Development to Manufacturing  3
   - PHM 837  Autonomic Pharmacology  1
   - PHM 840  Safety Pharmacology  2

3. Professional Elective Courses (Not more than 5 credits):
   - BLD 842  Managing Biomedical Lab Operations  2
   - PHM 851  Intellectual Property and Patent Law for Biomedical Sciences  2
   - PHM 854  Leadership and Team-Building for Biomedical Research  2
   - PHM 855  The Business of Biomedical Research Organizations  2
   - PHM 857  Project Management  2
   - PHM 858  Drug Development Process  3

Effective Fall 2018.
PART II - NEW COURSES

DEPARTMENT OF ANTHROPOLOGY

ANP 412  Method and Practice in Digital Heritage
Spring of every year. 3(3-0) P: ANP 201 or ANP 203 or ANP 204 or ANP 206 or approval of department
The application of digital methods and computational approaches to heritage questions, data, materials, collections.
Effective Fall 2018

DEPARTMENT OF ART, ART HISTORY, AND DESIGN

GD 160  Digital Graphic Design: Tools and Methods
Fall of every year. Summer of every year. 3(0-6) RB: Understanding of how to use a personal computer and web browsers.
Introduction of digital tools and methods specific to contemporary graphic design.
SA: STA 160
Effective Summer 2018

GD 200  History of Graphic Design
Fall of every year. Summer of every year. 3(3-0)
Survey of visual communication. Social, global and technological developments in graphic design as it relates to art historical movements and other design disciplines. Typography of printed and digital work from 1880 to present.
SA: HA 200
Effective Summer 2018

GD 260  Concepts of Graphic Design
Fall of every year. Spring of every year. 3(0-6) RB: Understanding of how to use a personal computer, web browsers, and mobile devices. R: Not open to students in the Graphic Design Major.
Overview of form and communication analysis and manipulation. Investigation of theory, concept and visual tools central to developing visual communication systems.
SA: STA 260
Effective Summer 2018

GD 295  Design Thinking for Entrepreneurs
Fall of every year. Spring of every year. Summer of every year. 3(0-6)
Skills in ideation and innovation, discovering human needs and matching them with feasible solutions developed in accordance with the principles and practices of entrepreneurship; creating value and working towards social good by developing solutions to complex issues affecting multiple systems or populations.
Effective Summer 2018

GD 303  Experimental Design Practices
Fall of every year. Spring of every year. 3(0-6) RB: Understanding of how to use a personal computer, web browsers, and mobile devices R: Open to students in the Experience Architecture Major or in the Graphic Design Major or in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major.
Studio-based survey of experimental and futures-oriented design practices that are interdisciplinary in nature, intersect with emergent practices in the visual arts, and address broader issues of power, normativity, and social justice.
SA: STA 303
Effective Summer 2018
GD 360  Graphic Design I: Graphic Form  
Fall of every year. Spring of every year. 3(0-6) P: STA 110 and STA 113 and STA 114 and STA 112  
Introduction to form analysis and manipulation, through theory, concept and visual tools, to develop clear formal languages. Traditional and digital craft. Development of verbal articulation.  
SA: STA 360  
Effective Summer 2018

GD 365  Typography I: Form and Meaning  
Fall of every year. Spring of every year. 3(0-6) P: STA 110 and STA 113 and STA 114 and STA 112  
Formal and communicative properties of typography. Letterform, font specification, style, meaning, texture, and space. Sequence of analysis from formal aspects, to communicative, to a synthesis of the two.  
SA: STA 365  
Effective Summer 2018

GD 460  Graphic Design II: Visual Communication  
Fall of every year. Spring of every year. 3(0-6) P: (GD 360 or STA 360) and (GD 365 or STA 365)  
RB: Understanding of how to use a personal computer and web browsers.  
Advance from the analysis of form to the meaning of form. Synthesis of form and content will progress towards cohesive communication systems.  
SA: STA 460  
Effective Summer 2018

GD 462  Spatial Design  
Fall of every year. 3(0-6) P: GD 360 and GD 365  
Development and application of visual communication elements for volumetric structures and spaces.  
SA: STA 462  
Effective Summer 2018

GD 465  Typography II: Typographic Systems  
Fall of every year. Spring of every year. 3(0-6) P: GD 360 and GD 365 RB: Understanding of how to use a personal computer and web browsers.  
Typographic exploration through grid, hierarchy, and systems development. Variety of purpose, content and viewer consideration in resulting appropriate forms.  
SA: STA 465  
Effective Summer 2018

GD 466  Identity Design  
Fall of every year. 3(0-6) P: GD 460  
Design development, hierarchical unification, and application strategies for the graphic identification of organizations and sub-units of organizations.  
SA: STA 466  
Effective Summer 2018

GD 467  Motion Design  
Spring of every year. 3(0-6) P: GD 360 and GD 365  
Time-based design utilizing sound and motion for visual communication and personal expression relating to the field of graphic design. Conceptual and formal explorations relating to the moving image such as motion graphics, stop-motion animation, and kinetic typography.  
SA: STA 467  
Effective Summer 2018

GD 468  Interaction Design  
Fall of every year. Spring of every year. 3(0-6) P: GD 460 RB: GD 467  
Digital interactivity as a tool for visual communication, design and distribution of ideas. Conceptual, formal and typographical explorations relating to screen-based activities such as interface design, user-interaction and basic animation.  
SA: STA 468  
Effective Summer 2018
GD 491  Selected Topics - Graphic Design
Fall of every year. Spring of every year. 3(0-6) A student may earn a maximum of 6 credits in all enrollments for this course. P: GD 360 or GD 365
Issues of technique, style, and content in graphic design.
Effective Summer 2018

GD 492  Senior Seminar and Professional Practice (W)
Spring of every year. 2(2-0) P: (STA 492A or concurrently) and completion of Tier I writing requirement R: Open to seniors in the Graphic Design Major.
Capstone course for graphic designers. Writing as a mode of issue delineation and definition, portfolio preparation.
Effective Summer 2018

GD 492A  Exhibition Practicum
Spring of every year. 1(1-0) P: Completion of Tier I Writing Requirement R: Open to seniors in the Graphic Design Major. C: GD 492 concurrently.
Exhibition experience in graphic design. Audience delineation, conceptual framing, use of space, and evaluation.
Effective Summer 2018

GD 493  Design Internship
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. P: GD 460 or GD 462 or GD 465 or GD 466 or GD 467 or GD 468 R: Approval of department.
Field experience in a working design environment under supervision of a graphic design professional.
Request the use of the Pass-No Grade (P-N) system.
Effective Summer 2018

GD 494  Design Center
Spring of every year. 3(0-6) P: GD 460 RB: One 400 level graphic design course. Contract required prior to registration R: Approval of department.
Practicum in design problem-solving, including extensive contact with selected clients at a professional level.
SA: STA 494
Effective Summer 2018

HA 100  World Art Appreciation
Summer of every year. 3(3-0)
Examination of visual arts from around the world in a variety of forms and in their historical, cultural, and sociopolitical contexts.
Effective Summer 2018

STA 170  Digital Photography: Tools and Concepts
Fall of every year. Spring of every year. Summer of every year. 3(0-6) RB: Understanding of how to use a personal computer and web browsers. R: Not open to students in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major.
Digital photography controls; organization of visual elements and composition; survey of contemporary content approaches; and, introduction to image file management and adjustment.
Effective Summer 2018

STA 270  Concepts of Photography
Spring of every year. Summer of every year. 3(0-6) P: STA 170 RB: Understanding of how to use a personal computer and web browsers. R: Not open to students in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major.
Survey of the multifaceted role of photography in art and culture today explored through creative projects, readings, written responses and discussions.
Effective Summer 2018
PART II – NEW COURSES

STA 476  The Photobook
Spring of every year. 3(0-6) P: STA 370
Digital and analog processes of making photo-driven artist books, with emphases on the development of long term photographic projects, communicating through sequence, utilizing a variety of book forms, hand binding techniques, and exploration of the contemporary photo book medium.
Effective Summer 2018

COLLEGE OF ARTS AND LETTERS

GSAH 201  Introduction to Global Studies in the Arts and Humanities
Fall of every year. Spring of every year. 3(3-0)
Surveys the ways the arts and humanities interpret and represent global issues, themes and interactions. Introduces key interdisciplinary terms and concepts for understanding global themes and contexts.
Effective Spring 2019

GSAH 301  Approaches to Global Studies in the Arts and Humanities
Fall of every year. Spring of every year. 3(3-0) P: GSAH 201
Explores broad theoretical debates in global studies. Offers a grounding in interdisciplinary frameworks of the humanities and the arts to understand and analyze global themes, contexts, and connections.
Effective Spring 2019

GSAH 313  Violence and Power in Global Contexts
Spring of every year. 3(3-0) P: GSAH 201
Explores issues and questions of violence in various regional, national, and transnational contexts through manifestations of human conflict as addressed in the arts and humanities. Broadens students' understanding of the relationships between violence, power, and resistance throughout history and in the present.
Effective Spring 2019

GSAH 314  Race, Gender, and Global Identities
Spring of every year. 3(3-0) P: GSAH 201
Addresses issues of diversity through an exploration of the complexity of identity and difference using global studies frameworks. Evaluates diversity in terms of race, gender, nationality, and inequality. Contributes to interdisciplinary understandings of intersecting identities and cultures in contemporary global settings using the arts and humanities.
Effective Spring 2019

GSAH 315  Global Perspectives on Arts and Performance
Spring of every year. 3(3-0) P: GSAH 201
Engages the visual and performing arts. Showcases the creative arts and performance as critical components of global studies. Emphasizes the various traditional and contemporary modes of global artistic activity in various regional, national, and transnational contexts. Promotes knowledge of diverse practices as they are manifested through the creative arts and their intersection with global studies.
Effective Spring 2019

DEPARTMENT OF COMMUNITY SUSTAINABILITY

CSUS 259  Sustainable Energy and Society
Spring of every year. 3(3-0) RB: EEM 255 or concurrently
Sustainable fuels and technologies, energy systems, energy transitions, and personal and societal roadblocks to achieving sustainable energy. Energy poverty, justice and decision-making.
Effective Spring 2019
CSUS 453  Watershed Planning and Management  
Spring of every year. 3(3-0) P: CSUS 354  
Foundations of watershed planning and management in the United States. Physical, chemical and socioeconomic conditions; legal, financial and institutional dimensions; management alternatives; stakeholders; educational campaigns; evaluation. 
Effective Spring 2019

DEPARTMENT OF ECONOMICS

EC 404  Behavioral Economics  (W)  
Fall of every year. 3(3-0) P: ((MTH 124 or MTH 132 or MTH 152H) and completion of Tier I writing requirement) and (EC 301 or EC 251H)  
Evidence of systematic departures from classical behavioral assumptions of economics. Translation of psychological principles into formal models of economic behavior. Analysis of topics such as risky choice, choices over time, and systematic deviations from rationality behavior.  
Effective Fall 2018

DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION

FSC 820  Regulatory Leadership in Food Law  
Spring of every year. 3(3-0) RB: (FSC 811) or prior coursework in food science, food law, or food safety Not open to students with credit in LAW 810U.  
Introduction to regulatory affairs through the regulation of food.  
Effective Summer 2018

FSC 821  Wine, Beer, and Spirits Laws and Regulations  
Spring of even years. 3(3-0) RB: (FSC 811) or prior coursework in food safety, food laws, or food science Not open to students with credit in LAW 810Y.  
Laws, regulations, and policies that govern alcoholic beverages in the United States.  
Effective Summer 2018

FSC 851  The Law of the Foreign Supplier Verification Program Rule  
Summer of odd years. 3(3-0) RB: (FSC 811) or prior coursework in food safety, food law, or food science Not open to students with credit in LAW 810V.  
Legal perspective of FDA's Foreign Supplier Verification Program of the Food Safety Modernization Act.  
Effective Summer 2018

FSC 852  The Law of the Preventive Controls for Human Food Rule  
Fall of odd years. 3(3-0) RB: (FSC 811) or prior coursework in food safety, food law, or food science Not open to students with credit in LAW 810W.  
Legal perspective of FDA's Preventive Controls for Human Food Rule of the Food Safety Modernization Act.  
Effective Summer 2018

FSC 853  The Law of the Produce Safety Rule  
Fall of even years. 3(3-0) RB: (FSC 811) or prior coursework in food safety, food law, or food science Not open to students with credit in LAW 810X.  
Legal perspective of FDA’s Produce Safety Rule of the Food Safety Modernization Act.  
Effective Summer 2018

DEPARTMENT OF HISTORY

HST 293  Witches, Demons and the Occult in Pre-Modern Europe  
Fall of every year. 3(3-0)  
Witch hunts in Europe in their religious and social contexts. European beliefs about magic, demonology and the occult from the late Middle Ages to c. 1700.  
Effective Fall 2018
HST 309  American Indian History: Precontact to the Present  
Spring of every year. 3(3-0)  
Gendered overview of indigenous history in the Americas. Precontact, encounter,  
intrusion and resistance to settler colonialism, forced removal, reservations, boarding  
schools, allotment, indigenous sovereignty.  
SA: HST 378, HST 379  
Effective Spring 2019

HST 371  Women and Gender in Asia  
Fall of every year. 3(3-0)  
Women in Asian societies, including political and religious leaders, merchants and traders,  
authors and artists, as well as ordinary women. Family structures, patriarchy and  
gendered social roles.  
Effective Fall 2018

**MSU COLLEGE OF LAW**

LAW 537S  Automated Vehicles and the Law  
Fall of every year. 0 to 6 credits. R: Open to Law students or law advanced students or law lifelong  
students or law non-degree students.  
Legal issues related to automated vehicles including product liability, cybersecurity,  
privacy, insurance, criminal law and procedure, federal and state regulation, and patents.  
How discovery and evidentiary presentation at trial may be managed.  
Effective Fall 2018

LAW 537T  Technology Transactions Skills  
Fall of every year. 0 to 6 credits. P: LAW 500M R: Open to Law students or law advanced students.  
Laws affecting technology transactions and the way transactions are structured,  
documented, and completed in contemporary transactional legal practice.  
Effective Fall 2018

LAW 566S  Environmental Justice  
Fall of every year. 0 to 6 credits. R: Open to Law students or law advanced students or law lifelong  
students or law non-degree students.  
How environmental law and civil rights law can be used to address disparate  
environmental harms experienced by low-income communities and communities of color.  
Effective Fall 2018

LAW 631T  Intellectual Property and Entrepreneurial Law Clinic I  
Fall of every year. 0 to 6 credits. P: (LAW 530D or LAW 530E or LAW 530N or LAW 530Q) and  
LAW 530J and (LAW 535D or concurrently) R: Open to Law students.  
Client representation and systemic advocacy related to intellectual property and  
entrepreneurial business law. Activities may include client counseling, research,  
transactional analysis, litigation, regulatory comments, educational materials, and  
outreach.  
Effective Fall 2018

LAW 631U  Intellectual Property and Entrepreneurial Law Clinic II  
On Demand. 0 to 6 credits. P: LAW 631T R: Open to Law students.  
Client representation and systemic advocacy related to intellectual property and  
entrepreneurial business law. Activities may include client counseling, research,  
transactional analysis, litigation, regulatory comments, educational materials, and  
outreach.  
Effective Fall 2018

**DEPARTMENT OF MATHEMATICS**

MTH 103A  College Algebra I  
Fall of every year. 3(3-0) Not open to students with credit in MTH 103 or MTH 116.  
Functions, graphing, and modeling, with a focus on linear functions and models.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Fall 2018
MTH 103B  College Algebra II  
Spring of every year. 3(3-0) P: MTH 103A Not open to students with credit in MTH 103 or MTH 116.  
Continuation of MTH 103A. Topics focus on exponential, logarithmic, polynomial, and rational functions.  
Effective Spring 2019

DEPARTMENT OF MECHANICAL ENGINEERING

ME 370  Mechanical Design and Manufacturing I  
Fall of every year. Spring of every year. 3(3-0) P: (ME 222 and (ME 300 or concurrently) and ME 391) and completion of Tier I writing requirement R: Open to juniors or seniors in the Mechanical Engineering Major.  
Engineering design of machine elements and mechanical systems. Computer-based analysis in support of design. Design for static and fatigue strength, deflection, and reliability.  
SA: ME 471  
Effective Fall 2018

ME 385  Computer Aided Design Tools  
Spring of every year. 3(0-6) P: ME 280 R: Open to students in the College of Engineering.  
Advanced 3-D solid modeling  
SA: ME 285  
Effective Fall 2018

ME 413  Cryogenic-Thermal Systems  
Spring of every year. 3(3-0) P: ME 410 or concurrently R: Open to juniors or seniors in the Mechanical Engineering Major.  
Low temperature properties of materials and fluids. Introduction to cryogenic liquefaction and refrigeration cycles, separation and purification systems, instrument systems for low temperature measurement, fluid storage and distribution, vacuum technology.  
Effective Fall 2018

ME 414  Mechanical Design of Cryogenic Systems  
Fall of every year. 3(3-0) P: ME 470 or concurrently R: Open to juniors or seniors in the Mechanical Engineering Major.  
Engineering mechanical design of cryogenic refrigeration fluid systems. Design, analysis and introduction to ASME codes pertaining to piping systems/components, vacuum insulated transfer-lines, cold boxes, and super-conducting magnet cooling.  
Effective Fall 2018

ME 441  Aerodynamics and Aircraft Performance  
Spring of every year. 3(3-0) P: ME 332 R: Open to juniors or seniors in the Mechanical Engineering Major.  
Solutions to inviscid and viscous fluid dynamical equations. Aerodynamics of airfoils, wing and fuselage. Aircraft performance parameters and basics of flight, including cruise, turning, takeoff and landing. Introduction to stability, including control surfaces, longitudinal and lateral stability and power effects.  
Effective Fall 2018

ME 470  Mechanical Design and Manufacturing II  
Fall of every year. Spring of every year. 3(3-0) P: ME 361 and ME 370 R: Open to juniors or seniors in the Mechanical Engineering Major.  
Kinematic analysis of linkage mechanisms, spur gears and cam-follower systems. Completion of design project.  
SA: ME 371  
Effective Fall 2018
COLLEGE OF OSTEOPATHIC MEDICINE

OST 689  Global Health and Culture in Haiti
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Human Medicine or in the College of Osteopathic Medicine or in the College of Nursing.

Introduction to culture and health care delivery in Haiti including rotations in primary care clinics and hospitals.
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 2018

DEPARTMENT OF PATHOBIOLOGY AND DIAGNOSTIC INVESTIGATION

PDI 870  Laboratory Animal Pathology
Summer of odd years. 2(1-2) RB: Background in histopathology, veterinary medicine, and systemic pathology R: Approval of department.

REINSTATEMENT  Diseases and pathology of laboratory animal species including mice, rats, ferrets, rabbits, primates, and fish. Use of laboratory animals for toxicological pathology in industry.
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 2018

DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

PHM 982  Master of Science Capstone Literature Review
Fall of every year. Spring of every year. Summer of every year. 1 to 2 credits. A student may earn a maximum of 2 credits in all enrollments for this course. P: PHM 850 RB: Completion of at least 24 credits of MS program R: Open to master's students in the Integrative Pharmacology Major or in the Pharmacology and Toxicology Major. Approval of department.
Advisor-supervised literature research and writing of a 15-20 page fully-referenced critical review paper on a relevant topic in pharmacology and toxicology.
Effective Fall 2018

OFFICE OF THE PROVOST

LWG 800N  Constitutional Law II
On Demand. 2 to 4 credits.
Procedure and substantive due process, equal protection, Bill of Rights, and Freedom of Expression.
Effective Fall 2018

LWG 804  Antitrust Law
On Demand. 2 to 4 credits.
How courts apply basic economic principles to business practice in a wide variety of industries.
Effective Fall 2018

LWG 808B  Corporate Finance
On Demand. 2 to 4 credits.
Principles of accounting, valuation, and the basic financial environment of close corporations and public companies.
Effective Fall 2018
PART II – NEW COURSES

LWG 817D  Evidence and the Expert Witness  
On Demand. 2 to 4 credits.  
Scientific and technical disciplines to the process of serving as an expert in a judicial proceeding.  
Effective Fall 2018

LWG 819  Partnership Tax  
On Demand. 2 to 4 credits.  
Tax issues associated with form, term, liquidation, transfer and class problems.  
Effective Fall 2018

LWG 835B  Federal Law and Indian Tribes  
On Demand. 2 to 4 credits.  
Law and policy of the United States regarding Indian Tribes and their citizens.  
Effective Fall 2018

LWG 835D  American Indian Children and the Law  
On Demand. 2 to 4 credits.  
American Indian children and the law including the implementation, interpretation and understanding of the Indian Child Welfare Act (ICWA).  
Effective Fall 2018

LWG 835E  Tribal Law  
On Demand. 2 to 4 credits.  
Survey of the laws that tribes enact to govern themselves.  
Effective Fall 2018

LWG 841B  Domestic Violence  
On Demand. 2 to 4 credits.  
Historical background of domestic violence. Understanding the nature of domestic violence, the prevention of domestic violence, and the survivor and batterer behavior.  
Effective Fall 2018

LWG 841F  Family Law: Child, Family and the State  
On Demand. 2 to 4 credits.  
Legal issues confronting families including marriage, parenthood, balancing work, domestic violence, adoption, and artificial insemination.  
Effective Fall 2018

LWG 848E  International Environmental Law  
On Demand. 2 to 4 credits.  
Introduction to the use of bilateral and multilateral realities and other international mechanisms.  
Effective Fall 2018

LWG 849F  Comparative Free Expression  
On Demand. 2 to 4 credits.  
Examination of approaches to free expression in a variety of different countries.  
Effective Fall 2018

LWG 865A  Animal Law  
On Demand. 2 to 4 credits.  
Survey of animal legal issues including property status, zoning and cruelty.  
Effective Fall 2018

LWG 866D  Water Law  
On Demand. 2 to 4 credits.  
Water rights under the riparian doctrine and the prior appropriation system.  
Effective Fall 2018

LWG 866Q  Regulating Environmental Risk  
On Demand. 2 to 4 credits.  
Regulatory responses to environmental and other risks to human life and health.  
Effective Fall 2018
PART II – NEW COURSES

LWG 879K  Law and Religion
On Demand. 2 to 4 credits.
Church/state law with special attention placed on legal doctrines under the Establishment Clause and Free Exercise Clause of the 1st Amendment.
Effective Fall 2018

LWG 891C  Negotiation
On Demand. 2 to 4 credits.
Introduction to the principles of negotiations. Multiple mock negotiations are required.
Effective Fall 2018

LWG 893G  Consumer Law
On Demand. 2 to 4 credits.
Special legal requirements for consumer transactions.
Effective Fall 2018

DEPARTMENT OF PSYCHOLOGY

PSY 930  Social, Cognitive, and Affective Neuroscience
Spring of even years. 3(3-0) R: Open to graduate students or master’s students or doctoral students in the Department of Psychology or approval of department.
The neural mechanisms of social, cognitive, and affective/motivational processes. Theory, research, and methodology concerns.
Effective Spring 2020

DEPARTMENT OF RELIGIOUS STUDIES

REL 411  Modern Jewish Thought (W)
Spring of even years. 3(3-0) P: Completion of Tier I Writing Requirement R: Not open to freshmen or sophomores.
REINSTATEMENT Representative Jewish thought from the Enlightenment to the present. Authors such as Moses Mendelssohn, Abraham Geiger, Leo Pinsker, Hermann Cohen, Franz Rosenzweig, Ahad Ha-Am, Martin Buber, Mordecai Kaplan, A. I. Heschel, and Emil Fackenheim.
Effective Fall 2018

DEPARTMENT OF STATISTICS AND PROBABILITY

STT 191  Selected Topics in Statistics
Fall of every year. Spring of every year. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course.
Topics in statistics and probability selected to complement existing courses.
Effective Fall 2018

DEPARTMENT OF SUPPLY CHAIN MANAGEMENT

SCM 941  Seminar on Empirical Research
On Demand. 3(3-0)
Empirical research published in the field of operations and sourcing management.
Effective Fall 2018

SCM 942  Seminar on Analytical Research
On Demand. 3(3-0)
Analytical research published in the field of operations and sourcing management.
Effective Spring 2019
COLLEGE OF VETERINARY MEDICINE

VM 500  Veterinary Science I
Fall of every year. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Introduction to veterinary science. Evidence based medicine; host, animal and environmental interactions in health.
   Effective Fall 2018

VM 501  One Health I
Fall of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Effective Fall 2018

VM 502  Veterinary Doctoring I
Fall of every year. 1(0-2) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Introduction to professionalism, basic communication skills, effective use of teams, medical ethics, health records, confidentiality, professional use of social media, and safe veterinary practices. Clinical doctoring skills, with emphasis on cutaneous, hematologic, immunologic, reproductive, and respiratory systems in health.
   Effective Fall 2018

VM 503  Veterinary Career and Practice Management I
Fall of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Debt, budgets, financial risk assessment, financial planning, career development, work-life balance, and recognizing impaired physical or mental health and the need for professional help.
   Effective Fall 2018

VM 504  One Health II
Spring of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Veterinary medicine and public health. Introduction to veterinary interactions with the public, including disaster response and crisis communication. Relevant laws, regulations, and regulatory agencies.
   Effective Spring 2019

VM 505  Veterinary Doctoring II
Spring of every year. 1(0-2) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Professionalism, communication, medical ethics, and social competence, including professional interactions, client communication, history taking, and recognizing cultural differences and their impact. Clinical doctoring skills, with emphasis on cardiovascular, digestive, endocrine, musculoskeletal, nervous, and urinary systems in health.
   Effective Spring 2019

VM 506  Veterinary Career and Practice Management II
Spring of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Health teams, leadership, workplace behavior, DVM job market, and the process of securing DVM employment.
   Effective Spring 2019

VM 507  One Health III
Fall of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Social issues of relevance to animals and the veterinary community. Emphasis on issues related to cutaneous, hematologic, immunologic, reproductive, and respiratory systems.
   Effective Fall 2019
VM 508  Veterinary Doctoring III  
Fall of every year. 1(0-2) R: Open to graduate-professional students in the College of Veterinary Medicine.  
  Professionalism, communication, medical ethics, social competence, and clinical doctoring skills, with emphasis on issues and skills involving disorders of the cutaneous, hematologic, immunologic, reproductive, and respiratory systems.  
  Effective Fall 2019

VM 509  Veterinary Career and Practice Management III  
Fall of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.  
  Veterinary business finance including financial statement literacy and ratio analysis. Cost-of-care estimates and their communication to clients. Giving and receiving feedback, building positive work relationships, conflict management.  
  Effective Fall 2019

VM 510  One Health IV  
Spring of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.  
  Social and medical issues of relevance to animals and the veterinary community. Emphasis on issues related to cardiovascular, digestive, endocrine, musculoskeletal, nervous, and urinary systems.  
  Effective Spring 2020

VM 512  Veterinary Doctoring IV  
Spring of every year. 1(0-2) R: Open to graduate-professional students in the College of Veterinary Medicine.  
  Professionalism, communication, medical ethics, social competence, and clinical doctoring skills, with emphasis on issues and skills involving disorders of the cardiovascular, digestive, endocrine, musculoskeletal, nervous, and urinary systems. Writing prescriptions, discharge instructions, and patient records. Managing emotions in work settings.  
  Effective Spring 2020

VM 515  Animals in Society  
Fall of every year. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.  
  Role of animals and veterinary medicine in society. Intersections of animal behavior, animal welfare, ethics, public health and regulatory medicine.  
  Effective Fall 2018

VM 516  Musculoskeletal System I  
Fall of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.  
  Structure and function of the musculoskeletal system in health.  
  Effective Fall 2018

VM 517  Nervous System I  
Fall of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.  
  Structure and function of the nervous system in health.  
  Effective Fall 2018

VM 518  Cardiovascular System I  
Fall of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.  
  Structure and function of the cardiovascular system in health.  
  Effective Fall 2018

VM 519  Cutaneous System I  
Fall of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.  
  Structure and function of the cutaneous system in health.  
  Effective Fall 2018
PART II – NEW COURSES

VM 520  Respiratory System I
Spring of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Structure and function of the respiratory system in health.
  Effective Spring 2019

VM 523  Immunologic and Hematologic Systems I
Spring of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Structure and function of the immunological and hematologic systems in health.
  Effective Spring 2019

VM 525  Digestive System I
Spring of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Structure and function of the digestive system in health
  Effective Spring 2019

VM 527  Endocrine System I
Spring of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Structure and function of the endocrine system in health.
  Effective Spring 2019

VM 528  Reproductive System I
Spring of every year. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Structure and function of the reproductive system in health.
  Effective Spring 2019

VM 529  Urinary System I
Spring of every year. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Structure and function of the urinary system in health
  Effective Spring 2019

VM 530  Veterinary Science II
Fall of every year. 4(2-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Host, agent, environment interaction for disease causation.
  Effective Fall 2019

VM 531  Immunologic and Hematologic System II
Fall of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Immunologic and hematologic disorders of animals.
  Effective Fall 2019

VM 534  Cutaneous System II
Fall of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Cutaneous system disorders of animals.
  Effective Fall 2019

VM 535  Reproductive System II
Fall of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
  Reproductive system disorders of animals.
  Effective Fall 2019
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Credits: Hours (Lab:Clinical)</th>
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<tr>
<td>VM 536</td>
<td>Respiratory System II</td>
<td>Fall of every year.</td>
<td>3(1-4) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Fall 2019</td>
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<tr>
<td>VM 537</td>
<td>Veterinary Career and Practice Management IV</td>
<td>Spring of every year.</td>
<td>1(0-2) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Spring 2020</td>
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<td>VM 539</td>
<td>Veterinary Career and Practice Management V</td>
<td>Fall of every year.</td>
<td>1(1-0) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Fall 2020</td>
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<tr>
<td>VM 565</td>
<td>Cardiovascular System II</td>
<td>Spring of every year.</td>
<td>2(1-2) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Spring 2020</td>
</tr>
<tr>
<td>VM 568</td>
<td>Urinary System II</td>
<td>Spring of every year.</td>
<td>3(1-4) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Spring 2020</td>
</tr>
<tr>
<td>VM 569</td>
<td>Musculoskeletal System II</td>
<td>Spring of every year.</td>
<td>2(1-2) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Spring 2020</td>
</tr>
<tr>
<td>VM 571</td>
<td>Nervous System II</td>
<td>Spring of every year.</td>
<td>3(1-4) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Spring 2020</td>
</tr>
<tr>
<td>VM 575</td>
<td>Digestive System II</td>
<td>Spring of every year.</td>
<td>3(1-4) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Spring 2020</td>
</tr>
<tr>
<td>VM 577</td>
<td>Endocrine System II</td>
<td>Spring of every year.</td>
<td>3(1-4) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Spring 2020</td>
</tr>
<tr>
<td>VM 578</td>
<td>Clinical Reasoning I</td>
<td>Fall of every year.</td>
<td>8(2-12) R:</td>
<td>Open to graduate-professional students in the College of Veterinary Medicine.</td>
<td>Fall 2020</td>
</tr>
</tbody>
</table>

VM 536: Respiratory system disorders of animals.
VM 537: Productivity and profitability, marketing, writing resumes and cover letters, interview strategies, professional development, and team selection, communication, and evaluation.
VM 539: Medical records management, laws applicable to the practice of veterinary medicine, professional malpractice and board complaints, evaluating job offers, negotiating employment contracts, and interviewing.
VM 565: Cardiovascular system disorders of animals.
VM 568: Urinary system disorders of animals.
VM 569: Musculoskeletal disorders of animals.
VM 571: Nervous system disorders of animals.
VM 575: Digestive system disorders of animals.
VM 577: Endocrine system disorders of animals.
PART II – NEW COURSES

VM 579  Clinical Reasoning II
Fall of every year. 7(2-10) R: Open to graduate-professional students in the College of Veterinary Medicine.
Advanced clinical reasoning skill development. Complex cases that involve multiple systems, animal populations, and public health implications.
Effective Fall 2020

VM 580  Veterinary Surgery and Anesthesia
Fall of every year. 3(1-4) R: Open to graduate-professional students in the College of Veterinary Medicine.
Applied veterinary surgical and anesthesia skills.
Effective Fall 2020

VM 581  Clinical Reasoning III
Spring of every year. 5(2-6) R: Open to graduate-professional students in the College of Veterinary Medicine.
Advanced clinical reasoning skill development integrating societal, cultural, economic and ethical components of veterinary clinical decision-making.
Effective Spring 2021

VM 582  Veterinary Clinical Experience
Spring of every year. 3(0-6) R: Open to graduate-professional students in the College of Veterinary Medicine.
Veterinary clinical workplace skill development.
Effective Spring 2021
PART III – COURSE CHANGES

DEPARTMENT OF ACCOUNTING AND INFORMATION SYSTEMS

ACC 201 Principles of Financial Accounting
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: CSE 101 R: Open to undergraduate students in the Business - Admitted major and open to undergraduate students in the School of Hospitality Business. R: Open to undergraduate students in the Business - Admitted major and open to sophomores or juniors or seniors in the Hospitality Business Major.
Purpose and content of corporate financial statements with emphasis on interpretation and understanding the effects of various transactions on these statements. Basic principles, conventions and concepts related to financial statements. Measurement of assets, liabilities, revenues and expenses. International accounting concepts.
Effective Fall 2017 Effective Fall 2018

ITM 888 Capstone: Business Analytics
Fall of every year. 3(3-0) 1 to 3 credits. R: Approval of department.
Practicum in the development and delivery of predictive data analysis for strategic decision making in organizations. Application of the principles and tools of analytics to real-world problems in research and development, marketing, supply chain, accounting, finance and human resources management. Development and presentation of analytical insights and recommendations.
Effective Fall 2012 Effective Fall 2018

DEPARTMENT OF ART, ART HISTORY, AND DESIGN

ATD 231 Textile Materials
Fall of every year. Spring of every year. 4(4-0) R: Not open to freshmen. Formation and properties of fibers, yarns, structure, finish, color and design of fabrics. Textile specification and selection for end-use performance.
SA: HED 231
Effective Spring 2015 Effective Summer 2018

ATD 325 Design by Draping
Spring of every year. 4(0-8) P: (ATD 111 or ATD 222) and (ATD 121 and ATD 231 and ATD 323) P: ATD 222 and ATD 231 and (ATD 323 or concurrently) RB: Basic apparel construction, textile materials, and pattern drafting.
Execution of original designs by fabric manipulation on a form. Evaluation of fit, drape, and balance.
SA: HED 323
Effective Spring 2015 Effective Summer 2018

ATD 332 Textile Design
Fall of every year. Spring of every year. 4(0-8) P: (ATD 111 or ATD 222) and (ATD 121 and ATD 231) RB: Basic apparel construction, textile materials, and pattern drafting RB: (ATD 231 and ATD 335) and Basic apparel construction, textile materials, and pattern drafting R: Not open to freshmen.
Textile design technology for surface design, knit and woven fabric development. Design organization, elements and principles.
SA: HED 232
Effective Spring 2015 Effective Summer 2018

ATD 335 Design Development and Presentation
Fall of every year. Spring of every year. 4(0-8) P: (ATD 111 or ATD 222) and ATD 121 P: ATD 121 RB: (ATD 222 and ATD 332) and basic computer knowledge. RB: (ATD 222 and ATD 332) and Understanding of how to use a personal computer and web browsers.
Technological exploration and creation of designs, technical drawings, storyboard presentations, and electronic portfolio.
Effective Spring 2015 Effective Summer 2018
ATD 424  Specialized Design
Spring of every year. 4(0-8) P: ATD 323 RB: Basic construction, pattern design, and draping.
Critical use of the design process for specialized end-use. Mass market design principles.
Problem-solving and conflict management in a professional team context. Project report strategies. Implications of innovative technologies for the future of design, art, and manufacturing. Utilization of technologies to create innovative and highly complex designs. Practical experiences within technologies. Workflow scenarios including concept, drawing, modeling, production, and presentation.
SA: HED 424
Effective Spring 2015 Effective Summer 2018

ATD 426  History of Dress and Textiles
Fall of every year. Spring of every year. 3(3-0) R: Not open to freshmen or sophomores.
History of dress and textiles as a reflection of the cultural milieu.
SA: HED 426
Effective Spring 2015 Effective Summer 2018

ATD 439  Portfolio Development and Exhibition  (W)
Fall of every year. 3(3-0) P: (ATD 323) and completion of Tier I writing requirement RB: ATD 335 R: Open to juniors or seniors.
Apparel and textile design philosophies, roles and ethics. Professional portfolio and exhibition(s). Capstone course.
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.
SA: HED 439
Effective Spring 2015 Effective Summer 2018

HA 250  American Art
Arts of North America
Spring of every year. 3(3-0) Interdepartmental with American Studies.
Major developments and themes in non-indigenous American art (painting, sculpture, architecture, material culture) from its colonial origins through the 20th century. Major developments and themes in North American arts (painting, sculpture, architecture, photography, textiles, ceramics, prints, and visual culture) from its pre-colonial origins into the mid-twentieth century.
Effective Fall 2015 Effective Summer 2018

STA 112  Art and Design: Concepts and Practices
Fall of every year. 3(2-2) R: Open to students in the Bachelor of Fine Arts in Art Education or in the Bachelor of Fine Arts in Studio Art or in the Studio Art major or in the Apparel and Textile Design major or in the Apparel and Textiles major. R: Open to students in the Apparel and Textile Design Major or in the Apparel and Textiles Major or in the Art Education Major or in the Graphic Design Major or in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major. Not open to students with credit in STA 111.
Theme-based study of aesthetic and conceptual issues surrounding contemporary art and design practices. Art/design vocabulary, critical thinking skills, understanding of diverse social roles of the artist and designer and relationship to visual art within contemporary culture and society.
Effective Fall 2015 Effective Summer 2018

STA 160  Digital Graphic Design: Tools and Methods
Summer of every year. 3(0-6) RB: Understanding of how to use a personal computer and web browsers.
Introduction of digital tools and methods specific to contemporary graphic design.
DELETE COURSE
Effective Spring 2018
STA 260  Concepts of Graphic Design  
Fall of every year. Spring of every year. Summer of every year. 3(0-6) RB: Understanding of how to use a personal computer, web browsers, and mobile devices. R: Not open to students in the Graphic Design Major.  
Overview of form and communication analysis and manipulation. Investigation of theory, concept and visual tools central to developing visual communication systems.  
DELETE COURSE  
Effective Spring 2018

STA 300  Intermediate Drawing  
Fall of every year. Spring of every year. 3(0-6) P: (STA 110 and STA 113 and STA 114) and (STA 111 or STA 112) P: STA 110 and STA 112 and STA 113 and STA 114  
Observational and imaginative drawing including the human figure. Non-representational drawing. Contemporary drawing systems, concepts, and processes.  
Effective Fall 2015 Effective Summer 2018

STA 303  Design Thinking  
Fall of every year. Spring of every year. 3(0-6) RB: Understanding of how to use a personal computer, web browsers, and mobile devices R: Open to students in the Experience Architecture Major or in the Graphic Design Minor or in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major or in the Entrepreneurship & Innovation Minor or approval of department.  
Core concepts and methods practiced throughout the design. Tools necessary to define challenges and build effective solutions, as an independent or collaborative contributor to human-centered problems.  
DELETE COURSE  
Effective Spring 2018

STA 330  Lithography  
Fall of every year. Spring of every year. 3(0-6) A student may earn a maximum of 15 credits in all enrollments for this course. P: (STA 110 and STA 113 and STA 114) and (STA 111 or STA 112) P: STA 110 and STA 112 and STA 113 and STA 114  
Basic processes of image-making in lithography, including both traditional and contemporary methods. Fundamentals of drawing and design as applied to printmaking, as well as development of personally innovative imagery and concept. Final independent project explores both two and three dimensional applications of print techniques.  
Effective Fall 2014 Effective Summer 2018

STA 335  Etching  
Fall of every year. Spring of every year. 3(0-6) A student may earn a maximum of 15 credits in all enrollments for this course. P: (STA 110 and STA 113 and STA 114) and (STA 111 or STA 112) P: STA 110 and STA 112 and STA 113 and STA 114  
Aesthetic principles and techniques such as soft ground, aquatint, dry point, transfer ground and crosshatching.  
Effective Fall 2014 Effective Summer 2018

STA 360  Graphic Design I: Graphic Form  
Fall of every year. Spring of every year. 3(0-6) P: (STA 110 and STA 113 and STA 114) and (STA 111 or STA 112)  
Introduction to form analysis and manipulation, through theory, concept and visual tools, to develop clear formal languages. Traditional and digital craft. Development of verbal articulation.  
DELETE COURSE  
Effective Spring 2018

STA 365  Typography I: Form and Meaning  
Fall of every year. Spring of every year. 3(0-6) P: (STA 110 and STA 113 and STA 114) and (STA 111 or STA 112)  
Formal and communicative properties of typography. Letterform, font specification, style, meaning, texture, and space. Sequence of analysis from formal aspects, to communicative, to a synthesis of the two.  
DELETE COURSE  
Effective Spring 2018
STA 370  Photography I
Fall of every year. Spring of every year. 3(0-6) P: (STA 110 and STA 113 and STA 114) and (STA 111 or STA 142) P: STA 110 and STA 112 and STA 113 and STA 114
Technical, aesthetic and critical skills in digital black and white photography. Camera-based, with production of well executed and effectively designed creative black and white photographic prints. Introduction to photography as a fine art medium, including the functions and controls of a digital camera; photography as a means of visual art expression, in monochrome and color; the basic aspects of image adjustment software; and, historical and contemporary approaches to both technical and artistic/conceptual practice.
Effective Fall 2015 Effective Summer 2018

STA 371  Art, Education and Society
Fall of every year. Spring of every year. 3(3-0) P: {HA 101 and HA 102} and Completion of Tier I Writing Requirement
Visual theory, learning theory, and social theory in historical and cultural contexts. Fieldwork and research-based written assignments.
Effective Fall 2015 Effective Summer 2018

STA 375  Photography II
Fall of every year. Spring of every year. 3(0-6) P: STA 370
Black and white film and digital photography. Technical, aesthetic and critical skills related to contemporary and historical practice utilizing the view camera and smaller format film and digital cameras, on- and off-camera strobe controls. Digital scanning, and manipulation, and darkroom techniques. Production of well executed and effectively designed creative black and white photographic prints. Experimental, alternative process, photographic methods, including view camera, Polaroid, and 35mm photographic systems, film processing, digital scanning and manipulation, and production of non-traditional print formats.
Effective Fall 2015 Effective Summer 2018

STA 420  Advanced Painting
Fall of every year. Spring of every year. 4(0-8) 3(0-6) A student may earn a maximum of 20 credits in all enrollments for this course. A student may earn a maximum of 18 credits in all enrollments for this course. P: STA 325
Advanced applications of painting concepts, styles, and techniques. Consideration of the language of contemporary painting.
Effective Fall 2015 Effective Summer 2018

STA 439  Advanced Printmaking
Fall of every year. Spring of every year. 4(0-8) 3(0-6) A student may earn a maximum of 20 credits in all enrollments for this course. A student may earn a maximum of 18 credits in all enrollments for this course. P: STA 330 or STA 335
Development of aesthetic and technical skills with particular focus on contemporary issues of content and concept. Opportunity for supervised individual study.
Effective Fall 2014 Effective Summer 2018

STA 440  Advanced Ceramics
Fall of every year. Spring of every year. 4(0-8) 3(0-6) A student may earn a maximum of 20 credits in all enrollments for this course. A student may earn a maximum of 18 credits in all enrollments for this course. P: STA 340 and STA 345
Development of aesthetic and technical skills with particular focus on contemporary issues of content and concept. Opportunity for supervised individual study.
Effective Fall 2015 Effective Summer 2018

STA 460  Graphic Design II: Visual Communication
Fall of every year. Spring of every year. 4(0-8) P: STA 360 and STA 365
Advance from the analysis of form to the meaning of form. Synthesis of form and content will progress towards cohesive communication systems.
DELETE COURSE
Effective Spring 2018
STA 462  Three-Dimensional Design  
Spring of every year. 4(0-8) P: STA 360 and STA 365  
- Development and application of visual communication elements for three-dimensional structures and compound surfaces.  
DELETE COURSE  
Effective Spring 2018  

STA 465  Typography II  
Fall of every year. Spring of every year. 4(0-8) P: STA 360 and STA 365 RB: Understanding of how to use a personal computer and web browsers.  
- Typographic grid exploration, hierarchy, system development. Variety of purpose, content and viewer consideration in resulting appropriate forms.  
DELETE COURSE  
Effective Spring 2018  

STA 466  Corporate Imagery  
Fall of every year. 4(0-8) P: STA 460  
- Design development, hierarchical unification, and application strategies for the graphic identification of organizations and sub-units of organizations.  
DELETE COURSE  
Effective Spring 2018  

STA 467  Time and Motion Design  
Fall of every year. 4(0-8) P: STA 360 and STA 365  
- Time-based design embraces the use of sound and motion for visual communication and personal expression relating to the field of graphic design. Conceptual and formal explorations relating to the moving image such as motion graphic identity systems, stop-motion animation, kinetic typography for film, television and architecture, digital video and sound production for short format.  
DELETE COURSE  
Effective Spring 2018  

STA 468  Interactive Web Design  
Spring of every year. 4(0-8) P: STA 460 RB: STA 467  
- Digital interactivity as a tool for visual communication, design and distribution of ideas. Conceptual, formal and typographical explorations relating to web-based activities such as interface design, user-interaction and basic animation. Research, writing, and discussion of current related events using personal blogging tools.  
DELETE COURSE  
Effective Spring 2018  

STA 472  Color Photography  
Fall of every year. Spring of every year. 4(0-8) 3(0-6) A student may earn a maximum of 18 credits in all enrollments for this course. P: STA 370  
- Technical, aesthetic, and critical skills related to contemporary and historical practice in the art of color photography. Utilize digital cameras and image manipulation software to address technical and creative problems in color photography related to personal artistic goals, natural and artificial light source settings, and a range of fine art issues.  
Effective Fall 2015 Effective Summer 2018  

STA 472S  Senior Project in Color Photography  
Fall of every year. Spring of every year. 3(0-6) R: Open to seniors in the Bachelor of Fine Arts in Studio Art. Approval of department. C: STA 472 concurrently.  
- Intensive studio work in color photography.  
Effective Fall 2015 Effective Summer 2018
STA 474  Studio and Location Lighting
Fall of every year. Spring of every year. 4(0-8) 3(0-6) A student may earn a maximum of 18 credits in all enrollments for this course. P: STA 370
Technical, aesthetic and critical skills related to contemporary and historical practice in the art of artificial lighting for photography. Utilize digital and film imaging, view camera and medium format cameras. Technical and creative problems in color and black and white photography related to personal artistic goals. Control of artificial light source settings on location and in studio.
Effective Spring 2014 Effective Summer 2018

STA 474S Senior Project in Studio and Location Lighting
Fall of every year. Spring of every year. 3(0-6) R: Open to seniors in the Bachelor of Fine Arts in Studio Art. Approval of department. C: STA 474 concurrently.
Intensive studio work in studio and location lighting.
Effective Fall 2015 Effective Summer 2018

STA 475 Photography Workshop
Fall of every year. Spring of every year. 4(0-8) 3(0-6) A student may earn a maximum of 20 credits in all enrollments for this course. A student may earn a maximum of 18 credits in all enrollments for this course. P: STA 375 or STA 472 or STA 474
Individualized study, resulting in a portfolio expressing a cohesive creative vision suitable for exhibition and professional presentation. Projects may address contemporary photographic issues in any creative field or format, from digital through antique processes.
Individualized study, resulting in a portfolio expressing a cohesive, creative vision suitable for exhibition and professional presentation. Projects may address contemporary photographic issues in any creative field or format, from digital through antique processes.
Effective Fall 2015 Effective Summer 2018

STA 475S Senior Project in Photography
Fall of every year. Spring of every year. 3(0-6) R: Open to seniors in the Bachelor of Fine Arts in Studio Art. Approval of department. C: STA 475 concurrently.
Intensive studio work in photography.
Effective Fall 2015 Effective Summer 2018

STA 494 Design Center
Fall of every year. Spring of every year. 4(0-8) P: STA 460 RB: One 400 level graphic design course. Contract required prior to registration. R: Approval of department.
Practicum in design problem-solving, including extensive contact with selected clients at a professional level.
DELETE COURSE
Effective Spring 2018

STA 499 Interdisciplinary Design: Projects and Contemporary Issues
Fall of every year. Spring of every year. 3(2-2) Interdepartmental with Communication Arts and Sciences. R: Open to juniors or seniors. Approval of department.
Contemporary issues in the broad survey of visual art design. Critical thinking, ethics, intellectual property, professionalism, team building, and project management. Related team-based interdisciplinary design projects based on a production cycle including problem definition, idea generation, research, project planning, production, evaluation, and distribution.
DELETE COURSE
Effective Spring 2018
COLLEGE OF ARTS AND LETTERS

GSAH 310  Conflict and Justice in a Global Setting
Questions of Justice in Global Contexts
Spring of every year. 3(3-0) P: ((GSAH 220 and GSAH 230) or approval of department) and completion of Tier I writing requirement. P: (GSAH 201 or approval of department) and completion of Tier I writing requirement.
Addresses global justice and ethics in regional, national, and transnational contexts through the study of environmental, political, social, religious, sexual and gender conflicts. Addresses issues of global justice and ethics in regional, national and transnational contexts through the study of how the arts and humanities have engaged with questions of forms of justice and human rights.
Effective Fall 2015 Effective Spring 2019

GSAH 311  Crossing Boundaries/Changing Worlds
Global Perspectives on Borders and Migration
Spring of every year. 3(3-0) P: ((GSAH 220 and GSAH 230) or approval of department) and completion of Tier I writing requirement. P: (GSAH 201 or approval of department) and completion of Tier I writing requirement.
Causes and motives, identities and relationships, transformations and traditions of people moving across geographic boundaries at local, regional, and national levels. Effect on local and global conditions, grounded in critical, creative, philosophical, and historical explorations.
Effective Fall 2015 Effective Spring 2019

GSAH 312  Media Mobility: Change, Access, Representation
Global Digital Cultures
Spring of every year. 3(3-0) P: ((GSAH 220 and GSAH 230) or approval of department) and completion of Tier I writing requirement. P: (GSAH 201 or approval of department) and completion of Tier I writing requirement.
Circulations and appropriations of media in the context of social, political, and technological change. Print, visual, film, radio, television, and digital culture as modes of social intervention and activism. Studies the transformative effects of digital media and communication on cultural exchange and creativity in global contexts. Introduces students to ethical and social questions concerning the use and circulation of digital media and communications in various regional, national, and transnational contexts.
Effective Fall 2015 Effective Spring 2019

GSAH 450  Global Concepts and Theories Seminar (W)
Senior Seminar in Global Studies in the Arts and Humanities (W)
Fall of every year. Spring of every year. 3(3-0) P: ((GSAH 310 and GSAH 311 and GSAH 312) or approval of department) and completion of Tier I writing requirement. P: (GSAH 301 or approval of department) and completion of Tier I writing requirement. P: (GSAH 310 or GSAH 311 or GSAH 312 or GSAH 313 or GSAH 314 or GSAH 315 or GSAH 391)
Grounding concepts and broad theoretical debates in global studies. Models and systems that theorize global relationships, formations, and interactions. Selected topics in global studies in the arts and humanities through guided interdisciplinary capstone research projects.
Effective Fall 2015 Effective Spring 2019

DEPARTMENT OF CHEMISTRY

CEM 161  Chemistry Laboratory I
Fall of every year. Spring of every year. Summer of every year. 1(0-3) P: (CEM 141 or concurrently) or (CEM 151 or concurrently) or (CEM 181H or concurrently) or (LB 171 or concurrently) Not open to students with credit in CEM 185H or LB 171L.
Experiments in general chemistry; stoichiometry, calorimetry, electrochemistry, molecular geometry, gas laws, kinetics, acids and bases, and inorganic chemistry. Introduction to basic chemistry laboratory techniques, including measurements, chemical reactions and basic spectroscopy.
Effective Fall 2013 Effective Summer 2019
CEM 162  Chemistry Laboratory II  
Fall of every year. Spring of every year. Summer of every year. 1(0-3) P: CEM 161 or CEM 185H or LB 171L RB: (CEM 142 or concurrently) or (CEM 152 or concurrently) or (CEM 182H or concurrently) Not open to students with credit in LB 172L.  
Analytical and inorganic chemistry, redox and acid-base titrations, spectrophotometric and gravimetric analysis; preparation and analysis of coordination complexes of nickel, iron, and cobalt. Continuation of CEM 161 with additional emphasis on kinetics, thermochemistry, titration, and synthesis.  
Effective Fall 2013 Effective Summer 2019  

DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES  

GLG 481  Reservoirs and Aquifers  
Fall of every year. Spring of odd years. 3(2-2) P: GLG 431 or concurrently  
Effective Fall 2017 Effective Fall 2018  

DEPARTMENT OF HISTORY  

HST 378  Native Americans in North American History to 1830  
Fall of every year. 3(3-0)  
Native American history from the contact period to removal policies of the 1830s. Range and variety of Native American cultures. Interactions with European cultures.  
DELETE COURSE  
Effective Fall 2018  

HST 379  Native Americans in North American History from 1830  
Spring of every year. 3(3-0)  
DELETE COURSE  
Effective Fall 2018  

DEPARTMENT OF MANAGEMENT  

MGT 818  Talent Management and Development  
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. P: MGT 810 or concurrently R: Open to master's students in the Eli Broad College of Business and The Eli Broad Graduate School of Management or approval of department.  
The role of managing human resources to realize organizational goals and mission. Employee recruitment and development, performance management, succession planning, and retention strategies. Career management and leadership development.  
Effective Fall 2015 Effective Fall 2018  

DEPARTMENT OF MATHEMATICS  

MTH 101  Quantitative Literacy I  
Fall of every year. Spring of every year. Summer of every year. 3 credits. P: (MTH 1825 or MTH 103) or designated score on Mathematics Placement Test  
Quantitative literacy including applications to health and risk, science, and the environment.  
Effective Fall 2016 Effective Summer 2018
MTH 102  Quantitative Literacy II  
Fall of every year. Spring of every year. Summer of every year. 3 credits. P: (MTH 1825 or MTH 103) or designated score on Mathematics Placement test  
Quantitative literacy including applications to finance, economics, and politics.  
Effective Fall 2016  Effective Summer 2018

MTH 103  College Algebra  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (MTH 1825) or designated score on Mathematics Placement test  
Not open to students with credit in MTH 116. Not open to students with credit in MTH 116 or MTH 103B.  
Number systems; functions and relations; exponents and logarithms; elementary theory of equations; inequalities; and systems of equations.  
SA: LBS 117  
Effective Fall 2013  Effective Summer 2019

DEPARTMENT OF MECHANICAL ENGINEERING

ME 285  Computer Aided Design Tools  
Fall of every year. Spring of every year. 3(0-6) P: ME 280 R: Open to students in the College of Engineering.  
Advanced 3-D solid modeling  
SA: MSM 260  
DELETE COURSE  
Effective Summer 2018

ME 300  Professional Issues in Mechanical Engineering  
Fall of every year. Spring of every year. 1(1-0) P: Completion of Tier I Writing Requirement R: Open to undergraduate students in the Mechanical Engineering Major. R: Open to juniors or seniors in the Mechanical Engineering Major.  
Effective Spring 2016  Effective Fall 2018

ME 371  Mechanical Design I  
Fall of every year. Spring of every year. 3(3-0) P: ME 361 or concurrently R: Open to juniors or seniors in the Mechanical Engineering Major.  
Analysis of displacement, velocity and acceleration in mechanical linkages. Kinematics and dynamics of machines.  
DELETE COURSE  
Effective Summer 2018

ME 412  Heat Transfer Laboratory  
Fall of every year. Spring of every year. 2(1-2) P: (ME 410) and completion of Tier I writing requirement R: (ME 410 or concurrently) and completion of Tier I writing requirement R: Open to juniors or seniors in the Mechanical Engineering Major.  
Practices and measurement techniques for heat transfer and thermal systems. Experimental problem solving applied to heat transfer.  
Effective Fall 2014  Effective Fall 2018

ME 425  Experimental Mechanics  
Fall of odd years. Fall of every year. 3(2-3) P: (ME 222) P: ME 222 R: Open to students in the College of Engineering.  
Measurement of stress, strain, vibration, and motion using strain gauges, accelerometers, photoelasticity, holography, Moire patterns, laser speckle and electronic imaging. Transducer design.  
SA: MSM 405  
Effective Fall 2014  Effective Fall 2018
ME 464  Intermediate Dynamics
Fall of even years. Spring of every year. 3(3-0) P: (ME 361) R: Open to students in the College of Engineering.
SA: MSM 403
Effective Fall 2014 Effective Fall 2018

ME 465  Computer Aided Optimal Design
Spring of every year. 3(3-0) P: (ME 222 and ME 280) and (ME 371 or concurrently) R: Open to juniors or seniors in the Mechanical Engineering Major.
Effective Fall 2014 Effective Fall 2018

ME 471  Mechanical Design II
Fall of every year. Spring of every year. 3(3-0) P: ME 222 and ME 371 and ME 391 R: Open to juniors or seniors in the Mechanical Engineering Major.
Engineering design of machine elements and mechanical systems. Computer-based analysis in support of design. Design for static and fatigue strength, deflection, and reliability.
DELETE COURSE
Effective Summer 2018

ME 475  Computer Aided Design of Structures
Fall of every year. 3(3-0) P: ME 471 or concurrently P: ME 370 R: Open to juniors or seniors in the Mechanical Engineering Major.
Computational methods for analysis, design, and optimization of structural components. Basic concepts in geometric modeling, finite element analysis, and structural optimization.
Effective Fall 2014 Effective Fall 2018

ME 481  Mechanical Engineering Design Projects
Fall of every year. Spring of every year. 3(1-6) P: (ME 410 and ME 471) and completion of Tier I Writing requirement P: (ME 410 and ME 470) and completion of Tier I writing requirement R: Approval of department; application required.
Effective Fall 2014 Effective Fall 2018

ME 497  Biomechanical Design in Product Development
Spring of every year. 3(3-0) Interdepartmental with Biomedical Engineering. P: ME 371 or concurrently P: ME 370 or concurrently R: Open to juniors or seniors in the Department of Mechanical Engineering.
Biomechanical product design with application to people or animals. Synthesis, prototyping, and analysis of designs. Project management. Market research.
SA: BME 491A, MSM 445
Effective Fall 2014 Effective Fall 2018

COLLEGE OF NATURAL SCIENCE

NSC 840  Writing in the Sciences
Fall of every year. Spring of every year. 2(2-0) Interdepartmental with Arts and Letters. A student may earn a maximum of 6 credits in all enrollments for this course.
Discussion and critique of students' writing in peer response workshop groups. Request the use of the Pass-No Grade (P-N) system.
DELETE COURSE
Effective Spring 2018
DEPARTMENT OF PATHOBIOLGY AND DIAGNOSTIC INVESTIGATION

PDI 514  Veterinary Neurosciences
Fall of every year. 2(2-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Introduction to the sensory, motor, and the special senses systems as they relate to domestic animals.
DELETE COURSE
Effective Fall 2018

PDI 518  Comparative Veterinary Gross Anatomy I
Fall of every year. 4(2-6) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Introduction to canine anatomy through lectures and dissection.
DELETE COURSE
Effective Fall 2018

PDI 519  Comparative Veterinary Gross Anatomy II
Spring of every year. 4(2-6) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Introduction to comparative anatomy of all domestic animals through lectures and dissection. Clinically relevant anatomy.
DELETE COURSE
Effective Spring 2019

PDI 520  Veterinary Tissue Structure and Function
Fall of every year. 4(3-3) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Microscopic anatomy and cellular physiology of vertebrate tissues. Introduction to the use of the microscope.
DELETE COURSE
Effective Fall 2018

PDI 521  Veterinary Organ Microanatomy
Spring of every year. 2(1-3) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Microanatomy of organ systems and relationship of structure to function.
DELETE COURSE
Effective Spring 2019

DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

PHM 850  Communications for Biomedical Researchers
Communications for Scientists
Fall of every year. Summer of every year. 2(2-0) R: Open to master's students or lifelong graduate students in the College of Osteopathic Medicine or in the Department of Pharmacology and Toxicology or in the Integrative Pharmacology Major or in the Pharmacology and Toxicology Major.
   Effective research and business communication, including written and verbal skills for a variety of audiences and purposes. Effective research and business communication, including written skills for scientific audiences.
Effective Fall 2014 Effective Fall 2018

DEPARTMENT OF PHYSIOLOGY

PSL 513  Animal Physiology for Veterinarians
Spring of every year. 4(4-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
   Physiology of the neural, cardiovascular, renal, respiratory, digestive, endocrine, and reproductive systems, and thermoregulation.
DELETE COURSE
Effective Spring 2019
SCHOOL OF SOCIAL WORK

SW 494A  Social Work Field Education: Foundation I
Social Work Field Education: Undergraduate Generalist Practice I
Fall of every year. 5(1-16) P: SW 340 R: Open to seniors in the School of Social Work. C: SW 440 concurrently.
Professionally supervised generalist social work practice in approved community agencies and campus-based seminar. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 2014 Effective Summer 2019

SW 494B  Social Work Field Education: Foundation II
Social Work Field Education: Undergraduate Generalist Practice II
Spring of every year. 5(1-16) P: SW 494A R: Open to seniors in the School of Social Work. C: SW 441 concurrently.
Continuation of professionally supervised generalist social work practice in approved community agencies and campus-based seminar. Integration and application of concepts in social work practice. Focus on writing skills for professional practice and career options.
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 2014 Effective Summer 2019

SW 893B  Social Work Field Education: Advanced Generalist Practice
Social Work Field Education: Graduate Advanced Generalist Practice
Summer of every year. 2(1-8) R: Open only to graduate students in the School of Social Work. Not open to students with credit in SW 894A or SW 894B. C: SW 842B concurrently.
Professionally supervised foundations of social work practice in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
Effective Summer 2006 Effective Summer 2019

SW 894A  Social Work Field Education: Graduate Generalist Practice I
Fall of every year. 4(1-16) R: Open to graduate students in the School of Social Work. Not open to students with credit in SW 893B. C: SW 840 concurrently.
Professionally supervised foundations of social work practice in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
Effective Fall 2009 Effective Summer 2019

SW 894B  Social Work Field Education: Graduate Generalist Practice II
Spring of every year. 4(1-16) P: SW 894A R: Open to graduate students in the School of Social Work. Not open to students with credit in SW 893B. C: SW 841 concurrently.
Continuation of professionally supervised foundations of social work practice in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 2010 Effective Summer 2019

SW 894D  Social Work Field Education: Clinical Practice I
Fall of every year. 4(1-16) P: SW 893B or SW 894B R: Open only to graduate students in the School of Social Work. Not open to students with credit in SW 893B or SW 894B. C: SW 850 concurrently.
Professionally supervised clinical social work practice with individuals, dyads, families, and small groups in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
Effective Summer 2005 Effective Summer 2019
SW 894E Social Work Field Education: Clinical Practice II  
Spring of every year. 4(1-16) P: SW 894D R: Open only to graduate students in the School of Social Work. C: SW 851 concurrently. 
Continuation of professionally supervised clinical social work practice with individuals, dyads, families and small groups in approved community agencies. Integration and application of concepts in social work practice. 
Request the use of the Pass-No Grade (P-N) system. 
Effective Summer 2005 Effective Summer 2019  

SW 894G Social Work Field Education: Macro Practice I  
Fall of every year. 4(1-16) P: SW 893B or SW 894B R: Open to graduate students in the School of Social Work. C: SW 863 concurrently. C: SW 865 concurrently. 
Professionally supervised organization and community social work practice in approved community agencies. Integration and application of concepts in social work practice. 
Request the use of the Pass-No Grade (P-N) system. 
Effective Summer 2018 Effective Summer 2019  

SW 894I Social Work Field Education: Macro Practice II  
Spring of every year. 4(1-16) P: SW 894G R: Open to graduate students in the School of Social Work. C: SW 864 concurrently. C: SW 866 concurrently. 
Continuation of professionally supervised organization and community social work practice in approved community agencies. Integration and application of concepts in social work practice. 
Request the use of the Pass-No Grade (P-N) system. 
SA: SW 894F  
Effective Summer 2018 Effective Summer 2019  

DEPARTMENT OF SOCIOLOGY  

SOC 310 Global Migration  
Fall of every year. Spring of every year. 3(3-0)  
Theory and research on the causes and consequences of human migration. Sociological, social psychological, historical, and demographic perspectives. 
Effective Spring 2014 Effective Spring 2018  

SOC 315 Family and Society  
Fall of every year. Spring of every year. Summer of every year. 3(3-0)  
Family development. Diversity of family form and organization in relation to personality, class, race, and gender. 
Effective Spring 2014 Effective Spring 2018  

SOC 451 Dynamics of Population  
Fall of every year. Spring of every year. 3(3-0) R: Not open to freshmen. 
Size, distribution, and composition of population by age and sex. Theories of the effect of fertility, mortality, and migration on population structures. Successful and unsuccessful population policies. 
Effective Spring 2014 Effective Spring 2018  

SOC 452 Advanced Seminar in Environmental Sociology  
Fall of every year. Spring of every year. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: SOC 252, or approval of department R: Not open to freshmen. 
Environmental conditions and social organization. Social relations and connection to resource use, pollution, energy, and risks. Growth and limits to growth. Environmental attitudes, actions, movements, and regulation. 
Effective Summer 2017 Effective Spring 2018  

SOC 852 Migration and Social Change  
Fall of odd years. Spring of odd years. Spring of even years. 3(3-0)  
Theory and research on the causes and consequences of human migration. Sociological, social psychological, and demographic perspectives. 
Effective Summer 2006 Effective Spring 2018
DEPARTMENT OF SUPPLY CHAIN MANAGEMENT

SCM 881  Global Supply Chain Management
Fall of every year. Spring of every year. Summer of every year. On Demand. 3(3-0) 2(2-0) P: SCM 870 R: Open to master’s students in the Supply Chain Management Major. Approval of department. R: Open to master’s students in the Supply Chain Management Major.
Requirements for global operations and strategy development. Similarities and differences of international and domestic supply chain operations.
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.
SA: MSC 881
Effective Fall 2017 Effective Fall 2018

SCM 882  Supply Chain Management Field Study
Supply Chain Management Project Management Research Paper
Fall of every year. Spring of every year. Summer of every year. On Demand. 5 credits. 3 credits. P: SCM 870 RB: Completion of 24 credits of Master of Science in Supply Chain Management program. RB: Completion of 21 credits of Master of Science in Supply Chain Management program. R: Open to master’s students in the Supply Chain Management Major.
Practical application of course material to a problem or situation in the student's organization. Development of project management skills and application with other course material to a situation in the student's organization.
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.
SA: MSC 882
Effective Summer 2016 Effective Fall 2019

SCM 920  Seminar in Manufacturing Strategy
Fall of even years. 3(3-0) R: Open to doctoral students.
DELETE COURSE
Effective Fall 2018

SCM 921  Seminar in Inventory Management
Spring of even years. 3(3-0) R: Open to doctoral students.
Classical, just-in-time, and multi-echelon inventory control models. Forecasting.
DELETE COURSE
Effective Spring 2019

SCM 930  Theory of Logistics Systems
Foundations in Logistics Research
Fall of even years. Spring of every year. 3(3-0) R: Open to doctoral students.
Development and management of firm logistics systems within the context of an integrated supply chain strategy. Elements of network, economic, behavioral, and systems theory in the design, management, and control of logistics systems. Development and management of firm logistics systems within the context of an integrated supply chain strategy. Explores foundational research in the logistics management field.
SA: MSC 930
Effective Fall 2009 Effective Fall 2018
SCM 932  **Logistics and Public Policy**  
*Emerging Thought and Current Trends in Logistics*  
**Fall of even years. Fall of odd years.** 3(3-0) RB: SCM 930 R: Open to doctoral students.  
History and rationale of government in the development, maintenance, and control of transportation and supply chain infrastructure. Interaction of users, carriers, government, and public to create, interpret, and refine national economic and environmental policies. Development and management of opportunities and challenges related to the financial and service implications of designing and delivering logistical solutions in global markets. Policy and business elements affecting strategic outsourcing, supply chain relationship management, global compliance, business analytics, and the use of information technology and decision support systems.  
SA: MSC 932  
**Effective Fall 2009 Effective Fall 2018**

**DEPARTMENT OF TEACHER EDUCATION**

**TE 904**  
**ELL/ESL Research and Practice: K-12**  
**Fall of every year. On Demand.** 3(3-0) R: Open to doctoral students.  
Sociocultural and socio-political contexts for research in ELL/ESL teaching and learning; methods in ELL/ESL research; biliteracy/bilingualism, multiliteracies/multilingualism, and syncretic literacies; methods and curricula in second language teaching; identity, motivation, gender, race, and class; parent, school, and community partnerships for second language learners.  
**Effective Fall 2010 Effective Fall 2018**

**TE 944**  
**Seminar in English Education**  
**Spring of every year. On Demand.** 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to doctoral students.  
Current issues in research, methods and policy in the field of English education.  
**Effective Fall 2010 Effective Fall 2018**

**TE 945**  
**Current Issues in Children's and Adolescent Literature**  
**Spring of every year. On Demand.** 1 to 3 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to doctoral students.  
Intensive study of current issues in writing, publishing, reading, teaching, and analyzing children’s and adolescent literature.  
**Effective Fall 2010 Effective Fall 2018**

**TE 946**  
**Current Perspectives on Literacy Research and Instruction**  
**Spring of every year. Spring of even years.** 3(3-0) R: Open to doctoral students.  
Theoretical and empirical development in literacy research and instruction.  
**Effective Fall 2010 Effective Fall 2018**

**TE 958**  
**History of Literacy Research and Instruction**  
**Fall of odd years. On Demand.** 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. R: Open to doctoral students.  
Key historical, political, scholarly, and educational issues influencing literacy curriculum and pedagogy.  
**Effective Fall 2010 Effective Fall 2018**

**TE 959**  
**Acquisition and Development of Language and Literacy**  
**Spring of every year. On Demand.** 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to doctoral students.  
Language and literacy development with an alternating focus on early and middle childhood and adolescence and adulthood. Major areas of language and literacy development including phonology, orthography, morphology, semantics, syntax, and pragmatics. Connections between oral and written language development. Home and school influences on language and literacy development. Individual differences in language and literacy development.  
**Effective Fall 2010 Effective Fall 2018**
**COLLEGE OF VETERINARY MEDICINE**

VM 511  Clinical Competencies I  
Fall of every year. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.  
Introduction to history taking, physical examination, and techniques associated with examination of various species.  
Request the use of the Pass-No Grade (P-N) system.  
DELETE COURSE  
Effective Fall 2018

VM 524  Basic Science in Clinical Medicine  
Spring of every year. 1(0-2) R: Open to graduate-professional students in the College of Veterinary Medicine.  
Integration of information learned in basic science courses by application to clinical cases.  
DELETE COURSE  
Effective Spring 2019

VM 541  Veterinary Career Development and Practice Management  
Spring of every year. 2(2-0) R: Open to graduate-professional students in the College of Veterinary Medicine.  
Foundations of career development and practice management skills.  
DELETE COURSE  
Effective Spring 2019

VM 548  Principles of Diagnostic Imaging  
Spring of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.  
Basic principles of diagnostic imaging including radiographic physics, safety, interpretive principles and normal veterinary anatomy.  
DELETE COURSE  
Effective Spring 2019