MICHIGAN STATE UNIVERSITY

Report of
THE UNIVERSITY COMMITTEE ON CURRICULUM
to the Faculty Senate
February 19, 2019

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
MICHIGAN STATE UNIVERSITY  
February 19, 2019

TO: Faculty Senate  
FROM: University Committee on Curriculum  
SUBJECT: New Academic Programs and Program Changes: New Courses and Course Changes

PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

1. Establish a Master of Arts degree in Agriculture, Food and Natural Resources Education in the Department of Community Sustainability. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its October 15, 2018 meeting.

a. Background Information:

Historically, an agricultural education graduate program at MSU has existed. However, when the former Department of Community, Agriculture, Recreation and Resource Studies (CARRS) was formed at MSU in 2004, the graduate program in Agriculture Extension Education was discontinued. Currently, there is a stand-alone Agriculture, Food and Natural Resources Education (AFNRE) undergraduate major (since 2013); however, there exists a need for MSU AFNRE undergraduates to pursue a graduate degree to advance their knowledge and career potential. Current undergraduate AFNRE students are unable to attain these skills and career advancement at a graduate level in Michigan and must attend institutions outside of Michigan to achieve their academic and professional goals.

Currently, there are no graduate programs similar to the proposed Agriculture, Food and Natural Resources Education (AFNRE) MA program at MSU or within the State of Michigan.

Preparation of educators to advance programmatic knowledge and teach in formal AFNRE education settings or a non-formal AFNRE setting requires a curriculum comprising a blend of agriculture, food and natural resources pedagogy. Due to changes in recent years, careers in agriculture, food and natural resources (AFNR) offer some of the most abundant opportunities for Michigan’s future workforce. More than ever, several complex issues face professionals in agriculture and natural resources. The U.S. Department of Education aims to incorporate green- and sustainability-related knowledge and skills standards into the existing National Career Clusters, including AFNRE. Food safety issues such as national outbreaks of E. coli, concerns over food quality, transportation costs, climate change, and renewed focus on health benefits of fresh produce have led to greater interest by the public in local and organic food systems. Wildlife/livestock disease issues such as Chronic Wasting Disease (CWD) relate to public health concerns and create new avenues for study. Finally, Michigan’s agricultural lands and natural resources are vital to the economy through agritourism and natural resources-based enterprises. Sustaining these lands affects overall community well-being. MSU’s teacher preparation program in Agriculture, Food and Natural Resources Education is unique in the country, with its focus on AFNRE sustainability for the benefit of communities in Michigan, the U.S. and the world.

Community Sustainability is an interdisciplinary department within the College of Agriculture and Natural Resources, with the purpose of educating scholars and practitioners prepared to address current and future challenges across inter-related issues in agriculture, food, natural resources, recreation, tourism, and communities. The department has a multidisciplinary faculty committed to scholarly programs to prepare teachers and practitioners in cross-cutting areas that assist in the development of sustainable agriculture, food, natural resources and communities.
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

b. **Academic Programs Catalog Text:**

**Admission**

Applications for admission to the master's program are reviewed by faculty who look for evidence of appropriate preparation for advanced interdisciplinary and professional study at the master's level and the likelihood of academic success, as indicated by an applicant's prior educational record, work experience, statement of professional goals, and letters of recommendation. Collateral courses may be required to overcome deficiencies in addition to the requirements for the master's degree. Collateral course work will not count towards the master's degree.

**Requirements for the Master of Arts Degree in Agriculture, Food and Natural Resources Education**

A minimum of 30 credits is required for the degree under Plan B (without thesis). The student's program of study must be developed in cooperation with and approved by the student's guidance committee and must include the requirements specified below.

**CREDITS**

1. All of the following core courses (12 credits):
   - CSUS 860 Youth Leadership: Theory and Practice 3
   - CSUS 861 Educational Theory and Application of Experiential Learning in AFNR 3
   - CSUS 863 Agriculture, Food and Natural Resources Education Laboratory Instruction: Theory and Practice 3
   - CSUS 898 Master's Professional Project 3

2. Complete 18 credits from the following:
   - CSUS 433 Grant Writing and Fund Development (W) 3
   - CSUS 445 Community-Based Environmental and Sustainability Education 3
   - CSUS 833 Program Evaluation in Agriculture and Natural Resources 3
   - CSUS 864 Agriculture, Food and Natural Resources Educator Induction 3
   - TE 801 Professional Roles and Teaching Practice I 3
   - TE 802 Reflection and Inquiry in Teaching Practice I 3
   - TE 803 Professional Roles and Teaching Practice II 3
   - TE 804 Reflection and Inquiry in Teaching Practice II 3
   - TE 807 Professional Development and Inquiry 3
   - TE 818 Curriculum in its Social Context 3
   - TE 823 Learning Communities and Equity 3
   - TE 825 Diverse Learners and Learning Subjects Matter 3
   - TE 831 Teaching School Subject Matter with Technology 3
   - TE 843 Secondary Reading Assessment and Instruction 3
   - TE 861A Teaching Science for Understanding 3

3. Completion and defense of a paper based on the master's professional project.

Effective Fall 2019.

2. Change the requirements for the Bachelor of Science degree in Horticulture in the Department of Horticulture.

*The concentrations in the Bachelor of Science degree in Horticulture 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 Horticulture** make the following changes:

(1) In item 3. a. make the following changes:

(a) Change the total credits from ‘34’ to ‘39’.
(b) Delete the following courses:

- HRT 204 Plant Propagation 2
- HRT 206 Training and Pruning Plants 1
- HRT 362 Applied Crop Improvement 1

Add the following courses:

- CSS 350 Introduction to Plant Genetics 3
- HRT 204 Plant Propagation and Use 3
- STT 200 Statistical Methods 3

(2) In item 3. b. under Horticultural Science make the following changes:

(a) Change the total credits from ‘33’ to ‘30’.

(b) In item (1) change the total credits from ‘12’ to ‘9’ and delete the following course:

- CSS 350 Introduction to Plant Genetics 3

(c) Replace items (2) and (3) with the following:

Complete 12 credits from the following:

- CSS 226L Weed Science Laboratory 1
- CSS 326 Weed Science 3
- HRT 211 Landscape Plants I 3
- HRT 212 Landscape Plants II 3
- HRT 218 Irrigation Systems for Horticulture 2
- HRT 218L Irrigation Systems for Horticulture Laboratory 1
- HRT 242 Passive Solar Greenhouses for Protected Cultivation 1
- HRT 243 Organic Transplant Production 1
- HRT 253 Compost Production and Use 1
- HRT 310 Nursery Management 3
- HRT 323 Floriculture Production: Herbaceous Perennials and Annuals 3
- HRT 332 Tree Fruit Production and Management 3
- HRT 336 Viticulture and Berry Production 2
- HRT 341 Vegetable Production and Management 3
- HRT 405 Sustainable Practices for Horticultural Food Crop Production 1
- HRT 475 International Studies in Horticulture 3

(d) Renumber item (4) to item (3).

(3) In item 3. b. under Sustainable and Organic Horticulture make the following changes:

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

- CSS 288 Principles of Weed Management 3

Add the following courses:

- CSS 226L Weed Science Laboratory 1
- CSS 326 Weed Science 3
- HRT 218 Irrigation Systems for Horticulture 2
- HRT 218L Irrigation Systems for Horticulture Laboratory 1
- HRT 405 Sustainable Practices for Horticultural Food Crop Production 1
(4) In item 3. b. under Horticulture Landscape Design, Construction, and Management make the following changes:

(a) Change the total credits from '37' to '34'.

(b) In item (1) change the credits from '22' to '25' and delete the following course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 218</td>
<td>Irrigation Systems for Horticulture</td>
<td>3</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>HRT 213</td>
<td>Landscape Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>HRT 213L</td>
<td>Landscape Maintenance Field Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>HRT 218</td>
<td>Irrigation Systems for Horticulture</td>
<td>2</td>
</tr>
<tr>
<td>HRT 218L</td>
<td>Irrigation Systems for Horticulture Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

(c) In item (2) change the credits from '15' to '9' and delete the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS 288</td>
<td>Principles of Weed Management</td>
<td>3</td>
</tr>
<tr>
<td>HRT 213</td>
<td>Landscape Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>HRT 213L</td>
<td>Landscape Maintenance Field Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>HRT 220</td>
<td>Annual and Aquatic Landscape Plants</td>
<td>3</td>
</tr>
<tr>
<td>HRT 415</td>
<td>Natural Landscapes, Native Plants, and Landscape Restoration</td>
<td>3</td>
</tr>
<tr>
<td>HRT 460</td>
<td>Green Roofs and Walls</td>
<td>1</td>
</tr>
</tbody>
</table>

Add the following courses:

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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
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<td>Weed Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CSS 326</td>
<td>Weed Science</td>
<td>2</td>
</tr>
<tr>
<td>HRT 460</td>
<td>Green Roofs and Walls</td>
<td>2</td>
</tr>
</tbody>
</table>

Effective Fall 2019.

3. Change the requirements for the Minor in Horticulture in the Department of Horticulture.

a. Under the heading Requirements for the Minor in Horticulture make the following changes:

(1) Change the credits required for the minor from '17' to '18'.

(2) In item 1. change the credits of HRT 204 from '2' to '3'.

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 206</td>
<td>Training and Pruning Plants</td>
<td>1</td>
</tr>
<tr>
<td>HRT 218</td>
<td>Irrigation Systems for Horticulture</td>
<td>3</td>
</tr>
<tr>
<td>HRT 220</td>
<td>Annual and Aquatic Landscape Plants</td>
<td>3</td>
</tr>
<tr>
<td>HRT 362</td>
<td>Applied Crop Improvement</td>
<td>1</td>
</tr>
<tr>
<td>HRT 415</td>
<td>Natural Landscape, Native Plants, and Landscape Restoration</td>
<td>3</td>
</tr>
</tbody>
</table>

Add the following courses:

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<tbody>
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<td>Irrigation Systems for Horticulture</td>
<td>2</td>
</tr>
<tr>
<td>HRT 218L</td>
<td>Irrigation Systems for Horticulture Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Effective Fall 2019.
COLLEGE OF ARTS AND LETTERS

1. Change the requirements for the Master of Fine Arts degree in Studio Art in the Department of Art, Art History, and Design. The University Committee on Graduate Studies (UCGS) approved this request at its January 14, 2019 meeting.

   a. Under the heading Admission make the following changes:

      (1) Replace paragraph two with the following:

      To be considered for admission to the Master of Fine Arts degree in Studio Art, an applicant must submit a digital portfolio of no more than 20 examples of original artwork and provide supplemental information as outlined at www.art.msu.edu.

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

      (1) Replace item 2. with the following:

      Complete both of the following courses during the first year of enrollment in the program: STA 890 Master of Fine Arts Seminar: Exploring Research, Resources, and Context and STA 891 Special Topics in Art Education (section Master of Fine Arts Seminar: Teaching and Pedagogical Practice in Studio Art)

      (2) Replace item 3. with the following:

      Complete 3 credits of STA 893 Master of Fine Arts Professional Seminar during the last year of enrollment.

      (3) Replace item 4. with the following:

      Complete at least 36 additional credits in Studio Art courses including:
      a. A minimum of 8 credits in both of the following courses: STA 895 Master of Fine arts Studio: Exploration and Research in Studio Art and STA 896 Master of Fine Arts Studio: Integration in Studio Art.
      b. A minimum of 5 credits in STA 897 Critique.
      c. At least 13 credits of Studio Art 898 Master of Fine Arts Research. These credits must be completed while in residence during the final two semesters of enrollment in the program.

      (4) Replace item 6. with the following:

      Complete one course of at least 4 credits outside the department during the first year of enrollment.

Effective Fall 2019.
2. Establish a **Graduate Certificate in Film Studies** in the Department of English. The University Committee on Graduate Studies (UCGS) approved this request at its September 10, 2018 meeting.

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

### a. Background Information:

The Graduate Certificate in Film Studies builds upon both the innovative undergraduate curriculum in film studies and the graduate curriculum in the Department of English. The certificate is a 9-credit course of study that provides graduate students with an in-depth grounding in current methodologies, practices, and disciplinary concerns relevant for conducting advanced research and teaching in film studies. Courses in the certificate examine the history, theory, and criticism of cinema and examine the medium of film as a global art, business, and technology of representation deeply informed by social dynamics of race, gender, sexuality, ability, and nation.

There are no similar programs to the Graduate Certificate in Film Studies at MSU. The Department of Screen Arts and Cultures at the University of Michigan offers a similar certificate, alongside a Ph.D. program in Film Studies. Other such certificates can be found at universities such as Johns Hopkins, UMass Amherst, U-Penn, CUNY, Texas A&M, and Rutgers. Given the existing need for the certificate amongst current students, these other programs will not offer competition, and the certificate will likely attract some graduate students to the university.

Currently in the Department of English, approximately 20% of our graduate students—and also of our applicants—are interested in working on film studies-related projects either in part or in whole in their research, as are numerous graduate students across the College of Arts and Letters and University. Graduate students currently have no systematic way of pursuing such specialization in their course work and teaching portfolios, nor of indicating such effort on their transcripts. The Graduate Certificate in Film Studies will formalize what is already happening at the graduate level in film studies. For students graduating from the University and pursuing academic teaching posts, the certificate will strengthen the interdisciplinary range and depth of their portfolios in their given field.

The Film Studies Program in the College of Arts and Letters is currently housed in the Department of English, which has cultivated a core faculty of internationally recognized scholars and filmmakers in film studies. The Graduate Certificate in Film Studies is a clear outgrowth of what already exists and does not require further resources to support. Currently, the Film Studies Program routinely runs graduate courses in the Department of English, typically as 400/800-level cross-listings that are open to both graduate and advanced undergraduates.

Since the certificate aims to support not only English graduate students but also graduate students working on film and media research from around the university, the curriculum has also been developed in consultation with graduate directors in Romance and Classical Studies, Linguistics and Languages, Writing, Rhetoric and American Cultures, African American and African Studies, Media and Information, and History. There are currently no existing 800-level film courses in these programs, so we have specifically developed one optional interdisciplinary, cross-listed course within the certificate—FLM 855—that can be taught by faculty in other departments interested in contributing to the program.

### b. Academic Programs Catalog Text:

The Graduate Certificate in Film Studies provides graduate students with an in-depth grounding in current methodologies, practices, and disciplinary concerns relevant for conducting advanced research and teaching in film studies. Courses in the certificate examine the history, theory, and criticism of cinema and study the medium of film as a global art, business, and technology of representation deeply informed by social dynamics of race, gender, sexuality, ability, and nation.

**Requirements for the Graduate Certificate in Film Studies**

CREDITS
Students must complete 9 credits from the following:

1. Both of the following courses (6 credits):
   - FLM 800 Methods in Film Studies 3
   - FLM 810 Seminar in Film Studies 3

2. One of the following courses (3 credits):
   - FLM 810 Seminar in Film Studies 3
   - FLM 820 Topics in Film Studies 3
   - FLM 855 Interdisciplinary Topics in Film Studies 3

Students who reenroll in FLM 810 must select a different topic to meet this requirement.

Students who wish to take a graduate-level film studies related course in another department in substitution of FLM 820 or 855 must request formal approval from the Director of the Film Studies Program. Only one substitution request (3 credits) will be accepted.

Effective Fall 2019.

3. Change the requirements for the Bachelor of Arts degree in Arabic in the Department of Linguistics and Germanic, Slavic, Asian and African Languages. The Teacher Education Council (TEC) approved this request at its January 10, 2019 meeting.
   a. Under the heading Requirements for the Bachelor of Arts Degree in Arabic make the following change in item 3. d.:

   (1) Change the total credits from ‘12’ to ‘15’.

Effective Fall 2019.

4. Change the requirements for the Minor in Arabic in the Department of Linguistics and Germanic, Slavic, Asian and African Languages.
   a. Under the heading Requirements for the Minor in Arabic make the following changes:

   (1) Change the total credits for the minor from ‘16’ to ‘19’.

   (2) In item 2. change the requirement from ‘One’ of the following courses to ‘Two’ of the following courses (6 credits).

Effective Fall 2019.

5. Change the requirements in the Master of Arts degree in Linguistics in the Department of Linguistics and Germanic, Slavic, Asian and African Languages. The University Committee on Graduate Studies (UCGS) approved this request at its January 14, 2019 meeting.
   a. Under the heading Admission, second paragraph, delete item 3.

   b. Under the heading Provisional Admission, delete the last sentence.

   c. Under the heading Requirements for the Master of Arts Degree in Linguistics delete the following course in item 2.:

   LIN  424  Introduction to Phonetics and Phonology  3
Add the following course:

LIN 825 Phonological Theory II 3

Effective Fall 2019.

6. Change the requirements in the Doctor of Philosophy degree in Linguistics in the Department of Linguistics and Germanic, Slavic, Asian and African Languages. The University Committee on Graduate Studies (UCGS) approved this request at its January 14, 2019 meeting.

a. Under the heading Admission, second paragraph, delete the following item 2., and renumber item 3. to item 2.

Completed at least two years of study in a foreign language at the college level.

Effective Fall 2019.

EII BROAD COLLEGE OF BUSINESS

1. Establish a Graduate Certificate in Accounting Analytics in the Department of Accounting and Information Systems. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its October 15, 2018 meeting.

The Graduate Certificate in Accounting Analytics is a Type 2 graduate certificate and will appear on the transcript as "Graduate Certificate Program in Accounting Analytics".

a. Background Information:

On July 1, 2003 the State of Michigan enacted the 150 Hour Rule for certification to be a Certified Public Accountant (CPA.) This rule requires CPAs candidates to have 150 credits of college education. The CPA profession advocated for this change because it was believed that a traditional 120 credit undergraduate program in accounting had become insufficient preparation due to the increasing complexity of accounting. As a majority of MSU accounting graduates seek to become a CPA, the 150 Hour Rule created significant student growth in the Master of Science in Accounting program.

There are two specific reasons that this certificate is needed. First, the field of accounting has continued to grow in complexity, and advancements in technology and availability of data has created the need for accounting professionals to enhance their skillset in accounting data analytics. Secondly, there are increasing numbers of students who are entering the university with a significant number of Advanced Placement credits. These students are graduating with more than the 120 credits required for their BA degree and in some cases, are close to meeting the requirements of the 150 Hour Rule. Many of these graduates are interested in being a CPA and are looking for alternative ways to meet the requirements of the 150 Hour Rule without enrolling in a master's in accounting program.

The graduate certificate leverages the strengths of Department of Accounting and Information Systems, and is consistent with the strategic goals of the department and college as it relates to data analytics. The online graduate certificate program in accounting analytics will allow accounting professionals to enroll in graduate level course work and update their skills in a convenient format. It will also provide an alternative pathway for students seeking to meet the 150 Hour Rule. A certificate program provides the graduate with a transcript to authenticate their additional education and training to enhance their professional portfolio.
b. **Academic Programs Catalog Text:**

The Graduate Certificate in Accounting Analytics is designed to meet the needs of accounting professionals by providing a foundation of understanding accounting implications of emerging data analytical technologies, technical skill development, and the management of projects. The certificate is available only online and is not open to students in the Master of Science Degree in Accounting.

**Requirements for the Graduate Certificate in Accounting Analytics**

Students must complete 9 credits from the following:

1. The following course (3 credits):
   
   ACC 827  **Accounting Analytics**  3

2. Two of the following courses (6 credits):
   
   ACC 814  **Advanced Auditing**  3  
   ACC 822  **Information Systems Project Management**  3  
   ACC 843  **Value Chain Accounting and Analytics**  3

**Academic Standards**

Students must maintain a minimum cumulative grade-point average of 3.0 in all courses in the certificate program with no grade below a 2.0.

Effective Summer 2019.

2. **Change the requirements for the Minor in Hospitality Business Real Estate Investment Management.** The University Committee on Undergraduate Education (UCUE) approved this request at its January 24, 2019 meeting.

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

   Enrollment in the minor is limited, and admission to the minor is competitive. Admission is based primarily on the cumulative grade-point average and grades in the core courses listed below. Academic and non-academic factors and experiences will also be considered. Minimum criteria for admission to the minor are:

   1. Completion of 56 credits.
   2. Completion of the following three core courses:
      
      a. ACC 201  **Principles of Financial Accounting**  3  
         Or  
         ACC 230  **Survey of Accounting Concepts**  3
      b. EC 201  **Introduction to Microeconomics**  3  
      c. STT 200  **Statistical Methods**  3  
         Or  
         STT 201  **Statistical Methods**  3  
         Or  
         STT 315  **Introduction to Probability and Statistics for Business**  3

   b. Under the heading **Minor in Hospitality Business Real Estate Investment Management** replace the entire entry with the following:

   Students must complete the requirements specified below (25 credits):

   1. All of the following courses (21 credits):
      
      EC 202  **Introduction to Macroeconomics**  3  
      HB 311  **Hospitality Finance**  3  
      HB 375  **Hospitality Marketing**  3  
      HB 382  **Hospitality Business Real Estate Investment Management**  3  
      HB 437  **Hospitality Revenue Management**  3  
      HB 473  **Hospitality Business Analytics**  3  
      HB 482  **Advanced Hospitality Finance**  3
Finance 311 or 320 may be used to substitute for Hospitality Business 311. Marketing 300 or 327 may be used to substitute for Hospitality Business 375.

2. Four credits from the following course (4 credits):
   HB 492 Hospitality Business Real Estate Professional Skills Workshop 1 to 4

Effective Summer 2019.

COMMUNICATION ARTS AND SCIENCES

1. Change the requirements for the Doctor of Philosophy degree in Information and Media in the College of Communication Arts and Sciences to the following. The University Committee on Graduate Studies (UCGS) approved this request at its January 14, 2019 meeting.

   a. Under the heading Admission replace the paragraphs with the following:

      Students are admitted to begin fall semester. Exceptional candidates may be admitted without a master's degree. Scores on the Graduate Record Examination General Test are required. Applicants with professional media experience may be given special consideration. All application materials are due in the program office by December 1st. Late applications may be considered. Complete details concerning application may be obtained from the program office in the college or the Web site at https://comartsci.msu.edu/information-media-phd.

   b. Under the heading Requirements for the Doctor of Philosophy Degree in Information and Media replace the entire entry with the following:

      The student must meet the requirements specified below:

      1. **Core Courses.** Complete all of the following (12 credits):
         - CAS 921 Theories of Media and Information 3
         - CAS 975 Introductory Methods 3
         - CAS 991 Ways of Knowing 3
         - Introduction to Statistics course at the 800-900 level approved by the academic advisor 3

      2. **Advanced Methods or Statistics.** (12 credits):
         Complete 3 credits in a specialized quantitative methods course, 3 credits in a specialized qualitative methods course, and 6 credits in an advanced methods or statistics course at the 800-900 level approved by the student’s academic advisor.

      3. **Advanced Theory.** (3 credits):
         Complete 3 credits of advanced theory as approved by the student’s academic advisor.

      4. **Concentration.** (15 credits):
         Complete 15 credits in an area of concentration selected in consultation with the guidance committee.

      5. **Professionalization Requirement**
         Each semester before the comprehensive examination, students must attend a minimum number of preapproved events intended to provide specific training or opportunities for professionalization, as specified in the program handbook.

      6. Completion of a second year project.

      7. Successful completion of the comprehensive examination.


   Effective Fall 2019.
COLLEGE OF EDUCATION

1. Change the requirements for the Doctor of Philosophy degree in Rehabilitation Counselor Education in the Department of Counseling, Educational Psychology and Special Education. The University Committee on Graduate Studies (UCGS) approved this request at its January 14, 2019 meeting.

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

   To be admitted to the doctoral program in Rehabilitation Counselor Education, applicants must submit both the university application forms and applicable application fee. Persons are admitted to the program once a year with enrollment starting fall semester. The deadline for submitting applications for admission is December 1st for the following fall semester.

   Applicants are evaluated by program faculty based on:

   1. A grade-point average of 3.3 or higher in master’s degree course work in rehabilitation counseling or a related field.
   2. Academic aptitude for doctoral-level study.
   3. Letters of personal and professional recommendation regarding the applicant’s academic capability and professional and personal qualifications.
   4. Relevant post-master’s professional work experience in rehabilitation counseling.
   5. Fitness for the profession, including self-awareness and emotional stability.
   6. Professional goals and interests that are compatible with the mission and objectives of the program.
   7. Oral and written communication skills.
   9. Potential for scholarship, professional leadership, and advocacy.
   10. Satisfactory scores on the Graduate Record Examination

   During the doctoral program admissions process, applicant curricular experiences are evaluated to verify completion of course work including (a) CACREP entry-level core curricular standards, (b) CACREP entry-level professional practice standards, and (c) CACREP entry-level curricular requirements of a specialty area so that any missing content can be completed before or concurrently with initial doctoral-level counselor education course work.

   b. Under the heading Requirements for the Doctor of Philosophy Degree in Rehabilitation Counselor Education replace the entire entry with the following:

   The student must meet the requirements specified below.

   CREDITS

   1. Educational Inquiry and Research. All of the following courses (20 credits):

      | Course   | Title                                    | Credits |
      |----------|------------------------------------------|---------|
      | CEP 930  | Educational Inquiry                      | 3       |
      | CEP 932  | Quantitative Methods in Educational Research I | 3       |
      | CEP 933  | Quantitative Methods in Educational Research II | 3       |
      | CEP 934  | Multivariate Data Analysis I             | 4       |
      | CEP 968  | Research Methods in Counseling and School Psychology | 3       |
      | CEP 995  | Practicum in Research Design and Data Analysis | 1       |
      | TE 931   | Introduction to Qualitative Methods in Educational Research | 3       |

   2. Ethics and Professional Practice of Counseling. All of the following courses (9 credits):

      | Course   | Title                                    | Credits |
      |----------|------------------------------------------|---------|
      | CEP 963  | Ethics in Counseling and School Psychology | 3       |
      | CEP 969  | Clinical Supervision in Counseling and School Psychology | 3       |
      | EAD 965  | Diversity and Equity in Postsecondary Education | 3       |

   3. Rehabilitation Counseling Proseminars. All of the following courses (9 credits):

      | Course   | Title                                    | Credits |
      |----------|------------------------------------------|---------|
      | CEP 960  | Theoretical Foundations of Counseling    | 3       |
      | CEP 964  | Practice and Profession of Rehabilitation Counseling | 3       |
      | CEP 965  | Psychosocial Bases of Rehabilitation and Disability | 3       |
4. **Professional Preparation Core.** All of the following courses (15 credits):
   - CEP 944A Rehabilitation Counselor Pedagogy 3
   - CEP 944B Teaching Practicum in Rehabilitation Counselor Education 3
   - CEP 944C Clinical Practice Practicum in Rehabilitation Counseling 6
   - CEP 944D Clinical Supervision Internship in Rehabilitation Counselor Education 3

5. Successful completion and defense of the dissertation. Students may not earn more than 30 credits in CEP 999 Doctoral Dissertation Research, of which 24 are required.

Effective Summer 2019.

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**COLLEGE OF ENGINEERING**

1. Change the requirements in the Bachelor of Science degree in Computer Science in the Department of Computer Science and Engineering.
   a. Under the heading **Requirements for the Bachelor of Science Degree in Computer Science** make the following changes:
      (1) In item 3. b. delete the following course:
          - CSE 410 Operating Systems 3
          Add the following course:
          - CSE 325 Computer Systems 3
      (2) In item 3. c. delete the following course:
          - CSE 484 Information Retrieval 3
          Add the following course:
          - CSE 410 Operating Systems 3

Effective Fall 2019.

2. Change the requirements in the Bachelor of Science degree in Computer Engineering in the Department of Electrical and Computer Engineering.

   The optional concentration in the Bachelor of Science degree in Computer Engineering is 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 Computer Engineering** make the following changes:
      (1) In item 3. b. change the total credits to '43'.
      (2) In item 3. b. delete the following course:
          - CSE 410 Operating Systems 3
          Add the following courses:
          - CSE 325 Computer Systems 3
          - ECE 366 Introduction to Signal Processing 3
      (3) Replace item 3. d. with the following:
Electives
Complete 21 credits of electives as specified below. At least 15 credits must be from the focus track electives and at least 6 credits from the core, with at least one course with a laboratory. Additional credits to meet the 21 credit requirement may be taken from other courses listed below, any 400-level Computer Science and Engineering (CSE) or Electrical and Computer Engineering (ECE) courses, or by completing an approved 3 or 4 credit experiential, out-of-classroom education experience obtained through engineering cooperative education or independent study.

Core
(1) At least 6 credits from the following:
- CSE 335 Object-oriented Software Design 4
- CSE 420 Computer Architecture 3
- CSE 422 Computer Networks 3
- or
- ECE 442 Introduction to Communication Networks 3
- ECE 430 Embedded Cyber-Physical Systems 4
- CSE 425 Introduction to Computer Security 3
- or
- ECE 456 Introduction to Communication and Network Security 3

Both CSE 422 and ECE 442 or CSE 425 and ECE 456 may not be used to fulfill this requirement.

Focus Track
At least 15 credits from the following:

Hardware
- ECE 402 Applications of Analog Integrated Circuits 4
- ECE 410 VLSI Design 4
- ECE 411 Electronic Design Automation 4
- ECE 431 Smart Sensor Systems 3
- ECE 445 Biomedical Instrumentation 3

Software Systems
- CSE 410 Operating Systems 3
- CSE 415 Introduction to Parallel Programming 3
- CSE 435 Software Engineering 3
- CSE 450 Translation of Programming Languages 3
- CSE 476 Mobile Application Development 3

Intelligent Systems
- ECE 446 Biomedical Signal Processing 3
- ECE 466 Digital Signal Processing and Filter Design 3
- CSE 440 Introduction to Artificial Intelligence 3

Electrical Systems
- ECE 305 Electromagnetic Fields and Waves I 4
- ECE 313 Control Systems 3
- ECE 377 Principles of Electronic Devices 3
- ECE 404 Radio Frequency Electronic Circuits 4
- ECE 417 Robotics 4

b. Under the heading Biomedical Engineering Concentration make the following changes:

(1) Add the following statement:

NOTE: Completing the Bachelor of Science degree in Computer Engineering with a concentration may require more than 128 credits.

(2) Under the heading Biomedical Engineering make the following changes:

(a) Change the credits of item 2. from ‘6’ to ‘9’ and add the following course:

- BE 444 Biosensors for Medical Diagnostics 3
(b) Delete item 3.

(c) Add the following note to item 2.:

Students may enroll in 3 or 4 credits of ECE 490 or 491 with biomedical engineering content as approved by the student’s advisor for partial fulfillment of this requirement.

Effective Fall 2019.

3. Change the requirements in the Bachelor of Science degree in Electrical Engineering in the Department of Electrical and Computer Engineering.

The optional concentration in the Bachelor of Science degree in Electrical Engineering is 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 Electrical Engineering make the following changes:

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 377</td>
<td>Principles of Electronic Devices</td>
<td>3</td>
</tr>
</tbody>
</table>

(2) In item 3. b. change the total credits to ’41’.

(3) Delete item 3. d.

(4) Replace item 3. e. with the following as 3. d.:

Complete a minimum of 18 credits including at least 12 credits from the focus areas below. The 12 credits must include at least one laboratory course (ECE 402, 404, 405, 407, 410, 415, 417, 420, 430, 431, 445, 458, 476, 477) and at least one 3 or 4 credit course from two different focus areas. Additional credits to meet the 18 credit requirement may be taken from any 400-level engineering course or by completing an approved 3 or 4 credit experiential education experience obtained in a minimum of three out-of-classroom experiences through engineering cooperative education or independent study. Students interested in the experiential education experience must contact the department for approval. Courses at the 400-level outside of Electrical and Computer Engineering may have restrictions or require additional prerequisites not included within this degree program.

**Computing and Electronics**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 402</td>
<td>Applications of Analog Integrated Circuits</td>
<td>4</td>
</tr>
<tr>
<td>ECE 410</td>
<td>VLSI Design</td>
<td>4</td>
</tr>
<tr>
<td>ECE 430</td>
<td>Embedded Cyber-Physical Systems</td>
<td>4</td>
</tr>
<tr>
<td>ECE 431</td>
<td>Smart Sensor Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECE 442</td>
<td>Introduction to Communication Networks</td>
<td>3</td>
</tr>
<tr>
<td>ECE 445</td>
<td>Biomedical Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>ECE 456</td>
<td>Introduction to Communication and Network Security</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electrosciences**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 404</td>
<td>Radio Frequency Electronic Circuits</td>
<td>4</td>
</tr>
<tr>
<td>ECE 405</td>
<td>Electromagnetic Fields and Waves II</td>
<td>4</td>
</tr>
<tr>
<td>ECE 407</td>
<td>Electromagnetic Compatibility</td>
<td>4</td>
</tr>
<tr>
<td>ECE 447</td>
<td>Introduction to Biomedical Imaging</td>
<td>3</td>
</tr>
<tr>
<td>ECE 449</td>
<td>Fundamentals of Acoustics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 476</td>
<td>Electro-Optics</td>
<td>4</td>
</tr>
<tr>
<td>ECE 477</td>
<td>Microelectronic Fabrication</td>
<td>3</td>
</tr>
</tbody>
</table>

**Systems**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 415</td>
<td>Computer Aided Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>ECE 416</td>
<td>Digital Control</td>
<td>3</td>
</tr>
</tbody>
</table>
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

ECE 417 Robotics 4
ECE 420 Machines and Power Laboratory 1
ECE 423 Power System Analysis 3
ECE 425 Solid State Power Conversion 3
ECE 446 Biomedical Signal Processing 3
ECE 448 Modeling and Analysis of Bioelectrical Systems 3
ECE 457 Communication Systems 3
ECE 458 Communication Systems Laboratory 1
ECE 466 Digital Signal Processing 3

(5) Under the Biomedical Engineering Concentration make the following changes:

(a) Delete item 3.

(b) Change item 2. to ‘Complete 9 credits from the following courses or 3 or 4 credits of ECE 490 or 491 with biomedical engineering content as approved by the student’s academic advisor’.

(c) In item 2. add the following course:

BE 444 Biosensors for Medical Diagnostics 3

Effective Fall 2019.

COLLEGE OF SOCIAL SCIENCE

1. Establish a Minor in Race and Ethnicity in the United States in the Department of Anthropology. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its November 15, 2018 meeting.

a. Background Information:

The College of Social Science is changing its requirements for the bachelor’s degree by reducing the required credits from 30 to 15 to encourage its students to take additional majors or minors to enhance their major courses of study. It is anticipated that social science graduates will enroll in and complete academic programs in other colleges in greater numbers than previously because of the credit flexibility created by the new requirements.

The new requirements continue the College’s tradition of combining disciplinary training with a liberal arts education, with a focus on thematic areas that will help students prepare for employment, continuing education, or global citizenship after graduation. To accomplish this, the college will require every student to complete an approved 15-credit interdisciplinary minor and 3 credits of experiential learning. Each minor must include 9 credits in Social Science and 6 credits outside of the College. Because the minors are structured specifically to meet the College of Social Science’s liberal arts requirement and learning objectives, each is open only to undergraduate majors in the College. In the future, if capacity exists in this minor and pending approval of contributing units, we will open to all university students.

The Minor in Race and Ethnicity in the United States aligns with the College of Social Science research focus on issues of race, ethnicity, equality, and social justice. The minor is administered by the Department of Anthropology in collaboration with the Department of Sociology.

The Minor in Race and Ethnicity in the United States assists students in learning and applying social scientific perspectives on the creation of racial and ethnic difference with specific focus on how race and ethnicity is constructed within the United States. Issues of race and ethnicity for specific groups are addressed in a number of academic programs and studies centers at Michigan State University, including programs jointly administered in the College and partner colleges. The minor is designed to complement these programs...
by challenging students to view race and ethnicity from a broad, multidisciplinary perspective.

b. **Academic Programs Catalog Text:**

The Minor in Race and Ethnicity in the United States, administered by the Department of Anthropology, is designed to assist students in understanding the social context of racial and ethnic categories by focusing on how it is constructed in the United States.

The minor is available as an elective to students who are enrolled in bachelor's degree programs in the College of Social Science. With the approval of the department and college that administer the student's degree program, the courses that are used to satisfy the minor may also be used to satisfy the requirements for the bachelor's degree.

Students who plan to complete the requirements of the minor should consult an undergraduate advisor in the College of Social Science.

**Requirements for the Minor in Race and Ethnicity in the United States**

<table>
<thead>
<tr>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students must complete a minimum of 15 credits from the following:</td>
</tr>
<tr>
<td>1. The following course (3 credits):</td>
</tr>
<tr>
<td>SOC 215 Race and Ethnicity</td>
</tr>
<tr>
<td>2. One of the following courses (3 or 4 credits):</td>
</tr>
<tr>
<td>ANP 433 Contemporary American Indian Communities</td>
</tr>
<tr>
<td>ANP 443 Human Adaptability</td>
</tr>
<tr>
<td>HDFS 442 Ethnic Families in America</td>
</tr>
<tr>
<td>HST 309 American Indian History: Precontact to the Present</td>
</tr>
<tr>
<td>HST 311 African American History since 1876</td>
</tr>
<tr>
<td>HST 317 American Jewish History</td>
</tr>
<tr>
<td>HST 327 History of Mexican Americans in the United States</td>
</tr>
<tr>
<td>MC 319 Asian American History</td>
</tr>
<tr>
<td>PLS 304 Minority Politics</td>
</tr>
<tr>
<td>3. Two of the following courses (6 credits):</td>
</tr>
<tr>
<td>AAAS 300 Survey in Africana Studies</td>
</tr>
<tr>
<td>ENG 350 Readings in African, African-American, or African Diaspora Literature</td>
</tr>
<tr>
<td>ENG 352 Readings in Asian/Asian American/Asian Diaspora Literature and Visual Culture</td>
</tr>
<tr>
<td>ENG 354 Readings in Native American Literature</td>
</tr>
<tr>
<td>PHL 350 Introduction to Social and Political Philosophy</td>
</tr>
<tr>
<td>PHL 451 Philosophy and the Black Experience</td>
</tr>
<tr>
<td>TE 250 Human Diversity, Power, and Opportunity in Social Institutions</td>
</tr>
<tr>
<td>Not more than one English or Philosophy option may be used toward this requirement.</td>
</tr>
<tr>
<td>4. The following capstone course (3 credits):</td>
</tr>
<tr>
<td>ANP 330 Race, Ethnicity and Nation: Anthropological Approach to Collective Identity</td>
</tr>
</tbody>
</table>

Effective Fall 2019.

2. Change the requirements for the **Minor in Defense Studies and Leadership** in the Department of History.

a. Under the heading **Requirements for the Minor in Defense Studies and Leadership** make the following changes:

(1) In item 1. Change the total credits from ‘4’ to ‘4 to 6’.

(2) In item 1. change the credits of MS 210 and MS 220 from ‘1’ to ‘2’.

(3) In item 4. delete the following course:
HST 395 The Social History of War 3

(4) In item 5. delete the following courses:

PLS 140 Government and Politics of the World 3
PLS 344 Politics in the Third World 3
PLS 362 Foreign Policy 3
PLS 363 International Political Conflict 3

Add the following courses:

PLS 140 Introduction to Comparative Politics 3
PLS 344 Politics of Developing Areas 3
PLS 362 American Foreign Policy and National Security 3
PLS 363 International and Domestic Political Conflict 3

Effective Summer 2019.

3. Change the requirements for the Bachelor of Arts degree in Child Development in the Department of Human Development and Family Studies. The Teacher Education Council (TEC) approved this request at its January 10, 2019 meeting.

The concentrations in the Bachelor of Arts degree in Child Development are noted on the student’s academic record when the requirements for the degree have been completed.

b. Under the heading Requirements for the Bachelor of Arts Degree in Child Development make the following changes in item 3.:

(2) In item a. change the total credits from ‘26’ to ‘27’ and add the following course:

HDFS 322L Interaction and Curriculum for Infants and Toddlers
- Laboratory 1

(3) In item b. delete item 2.

Effective Summer 2019.

4. Change the requirements in the Minor in Leadership of Organizations in the School of Human Resources and Labor Relations.

a. Under the heading Requirements for the Minor in Leadership of Organizations make the following changes:

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

ANP 475 Organizational Anthropology 3

Add the following course:

SOC 241 Social Psychology 3

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

WRA 491 Special Topics 1 to 4

Add the following courses:

CSUS 422 Youth Leadership: Theory and Practice 3
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHL 340</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>REL 185</td>
<td>Introduction to Religion and Nonprofits</td>
<td>3</td>
</tr>
<tr>
<td>REL 485</td>
<td>Religion and Nonprofit Leadership (W)</td>
<td>3</td>
</tr>
<tr>
<td>WRA 401</td>
<td>Rhetoric, Leadership and Innovation</td>
<td>3</td>
</tr>
<tr>
<td>WS 404</td>
<td>Women and the Law in the United States</td>
<td>3</td>
</tr>
</tbody>
</table>

Change the note following item 3. to:

Students who choose REL 291 must obtain prior approval from the academic advisor to ensure content is specific to Leadership of Organizations.

Effective Fall 2019.

5. Change the requirements for the **Bachelor of Arts** degree in **Social Work**.
   a. Under the heading **Admission as a Junior**, replace item 3. with the following:

   Completed the courses in related areas reference in items 3. b. (1), (2), (3), (4), and (5) under the heading **Requirements for the Bachelor of Arts Degree in Social Work**.

   b. Under the heading **Requirements for the Bachelor of Arts Degree in Social Work** make the following changes:

   (1) In item 3. a. (1) delete the following course, changing the total credits from ‘11’ to ‘8’:

   PLS 100 Introduction to American Politics 3

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

   HNF 150 Introduction to Human Nutrition 3

   (3) Add the following item 3. a. (5):

   One of the following courses (3 credits):
   
   PLS 100 Introduction to American Politics 3
   PLS 140 Introduction to Comparative Politics 3

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

   SW 493A Social Work Field Education: Integrative Field Seminar I 1
   SW 493B Social Work Field Education: Integrative Field Seminar II 1

   (5) In item 3. b., add the following statement:

   Students must pass (P) SW 494A to progress to SW 494B.

   (6) In item 3. b., change the credits of SW 494A and SW 494B from ‘5’ to ‘4’.

Effective Fall 2019.
6. Change the requirements for the Minor in Sociology in the Department of Sociology.
   
a. Under the heading Requirements for the Minor in Sociology make the following changes:
   
   (1) Delete item 1. delete the following course:

   SOC  131  Social Problems  3

   Add the following course:

   SOC  214  Social Inequality  3

   Effective Fall 2019.
PART II - NEW COURSES

DEPARTMENT OF ART, ART HISTORY, AND DESIGN

STA 890  Master of Fine Arts Seminar: Exploring Research, Resources, and Context
Fall of every year. 3(3-0) R: Open to master of fine arts students in the Master of Fine Arts in Studio Art.
   Exposure to diverse resources, media, techniques, and theories both, internal and external to art and design. Analysis and incorporation of varied philosophical, historical, and contemporary perspectives. Contextualization of individual artistic practice and integration of external knowledge into studio methodologies.
   Effective Fall 2019

STA 895  Master of Fine Arts Studio: Exploration and Research in Studio Art
Fall of every year. Spring of every year. 2 to 8 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Open to master of fine arts students in the Master of Fine Arts in Studio Art.
   Advanced study in Studio Art focused on exploration and intersection of ideation and form and extended development in chosen media(s).
   Effective Fall 2019

STA 896  Master of Fine Arts Studio: Integration in Studio Art
Fall of every year. Spring of every year. 2 to 8 credits. A student may earn a maximum of 16 credits in all enrollments for this course. RB: 8 credits STA 895 R: Open to master of fine arts students in the Master of Fine Arts in Studio Art.
   Further study in Studio Art focused on the increased integration of form and content. Individual artistic development.
   Effective Fall 2019

STA 897  Critique
Fall of every year. Spring of every year. 1 credit. A student may earn a maximum of 5 credits in all enrollments for this course. R: Open to master of fine arts students in the Master of Fine Arts in Studio Art.
   Presentation of artwork to faculty, peers, and community in a group setting.
   Communication of essential ideas and incorporation of criticism
   Request the use of the Pass-No Grade (P-N) system.
   Effective Fall 2019

COLLEGE OF COMMUNICATION ARTS AND SCIENCES

CAS 990  Independent Study
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. Interdepartmental with Advertising and Journalism and Media and Information. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open to doctoral students in the College of Communication Arts and Sciences or approval of college.
   Independent research under faculty direction.
   Effective Fall 2019

CAS 991  Ways of Knowing
Fall of every year. Spring of every year. 3(3-0) Interdepartmental with Advertising and Journalism and Media and Information. R: Open to doctoral students in the College of Communication Arts and Sciences or approval of college.
   Ways humans acquire, convey, organize and shape knowledge and information, and are shaped and influenced by it. Neurological, psychological linguistic, philosophical, cultural, and logical dimensions of human knowledge.
   Effective Fall 2019
**DEPARTMENT OF COMMUNITY SUSTAINABILITY**

CSUS 863  Agriculture, Food and Natural Resources Education Laboratory Instruction: Theory and Practice
Summer of every year. 3(2-2)
Research-based pedagogy and application of laboratory experiences in teaching and learning. Current principles and practice in AFNRE laboratory learning in formal and non-formal education. Field trips required.
Effective Summer 2019

CSUS 864  Agriculture, Food and Natural Resources Educator Induction
Fall of every year. 3(3-0)
Effective Summer 2019

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

CSE 102  Algorithmic Thinking and Programming
Fall of every year. Spring of every year. Summer of every year. 3(1-4) P: (MTH 103 or MTH 103B or MTH 116 or MTH 124 or MTH 132 or MTH 152H or LB 118) or designated score on Mathematics Placement test Not open to students with credit in CSE 231.
The fundamentals of computing, algorithms and programming, using a high-level language such as Python. Integrating programs with other applications.
Effective Fall 2019

CSE 325  Computer Systems
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: CSE 320 or ECE 331 R: Open to students in the College of Engineering or in the Lyman Briggs Computer Science Coordinate Major or in the Lyman Briggs Computer Science Major.
Effective Fall 2019

**DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING**

ECE 377  Principles of Electronic Devices
Fall of every year. Spring of every year. 3(3-0) P: PHY 184 and ECE 202 R: Open to students in the Department of Electrical and Computer Engineering. Not open to students with credit in ECE 474.
Theory and basic principles of the operation of solid state devices. Semiconductor device equations. P-N junction theory developed and applied to the analysis of diodes, bipolar transistors, field effect transistors.
Effective Fall 2019

ECE 417  Robotics
Spring of every year. 4(3-3) P: ECE 313 or ME 451 R: Open to undergraduate students or graduate students in the Department of Electrical and Computer Engineering.
Robot modeling, kinematics, dynamics, planning, trajectory generation, and control.
Effective Fall 2019

ECE 430  Embedded Cyber-Physical Systems
Fall of every year. 4(3-3) P: ECE 331 R: Open to students in the Department of Electrical and Computer Engineering.
Effective Fall 2019
PART II – NEW COURSES

ECE 431  Smart Sensor Systems
Spring of odd years. 3(2-3) P: ECE 303 and ECE 331 R: Open to students in the Department of Electrical and Computer Engineering.
  Architecture and design of microcontroller-based embedded smart sensor systems.
  Theory and techniques of instrumentation and smart system implementation.
  Effective Fall 2019

ECE 822  Power System Analysis
Spring of every year. 3(3-0) P: ECE 320 or concurrently R: Open to graduate students in the Department of Electrical and Computer Engineering. Not open to students with credit in ECE 423.
  Effective Spring 2018

ECE 824  Power System Reliability
Fall of odd years. 3(3-0) RB: STT 441
  Effective Fall 2017

DEPARTMENT OF ENGLISH

FLM 800  Methods in Film Studies
Fall of odd years. 3(3-2)
  Foundations in film and media analysis, research methods, and pedagogy.
  Effective Fall 2019

FLM 810  Seminar in Film Studies
Fall of even years. 3(3-2) A student may earn a maximum of 6 credits in all enrollments for this course.
  Current topics in the discipline of film studies.
  Effective Fall 2019

FLM 820  Topics in Film Studies
Spring of every year. 3(3-2) A student may earn a maximum of 9 credits in all enrollments for this course.
  Seminar constructed around a topic or critical problem in film analysis, theory, history, or criticism.
  Effective Fall 2019

FLM 855  Interdisciplinary Topics in Film Studies
Spring of even years. 3(3-2) Interdepartmental with French and History.
  Topics in film studies that engage other disciplines and fields through historical, cultural, and formal content.
  Effective Fall 2019

DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION

FSC 843  Exposure Science and Environmental Epidemiology
Spring of odd years. 3(3-0) RB: Statistics, basic biological and chemical science
  Human exposure to chemicals in food and the environment and its relationship to health and illness. Applied concepts in toxicology, exposure assessment, environmental epidemiology, and risk assessment.
  Effective Fall 2019

FSC 844  Risk Assessment of Foodborne Chemicals and Toxins
Spring of even years. 3(3-0) RB: Calculus, basic biological and chemical sciences, toxicology
  Human health risk assessment, including hazard identification, dose-response and exposure assessment, and risk characterization. Application to food safety and environmental risks.
  Effective Fall 2019
DEPARTMENT OF GEOGRAPHY, ENVIRONMENT, AND SPATIAL SCIENCES

GEO 208  Physical Geography of the National Parks
Fall of odd years. 2(2-0)
REINSTATEMENT  Physical features such as geology, landforms, biota, and waters of United States and
Canadian national parks, forests, seashores and lakeshores. Emphasis on formation and
distribution.
Effective Fall 2019

DEPARTMENT OF HISTORY

HST 389  World War II in Asia and the Pacific
Fall of every year. 3(3-0)
World War II with specific reference to Asia and the Pacific theater. Historical contexts,
legacies and memories in popular culture. Relationship to modern colonialism,
decolonization, nationalism and racism.
Effective Fall 2019

DEPARTMENT OF HORTICULTURE

HRT 218L  Irrigation Systems for Horticulture Laboratory
Spring of every year. 1(0-2) P: HRT 218 or concurrently R: Open to undergraduate students or
agricultural technology students.
Design, installation and maintenance of irrigation systems for horticultural crops. Irrigation
system hydraulics, programming, assembly of irrigation equipment and components.
Effective Fall 2019

COLLEGE OF NURSING

NUR 998  Application of Scientific Knowledge in a Clinical Practicum
On Demand. 1 to 3 credits. R: Open to doctoral students in the College of Nursing.
Advanced clinical and research skills needed to identify clinical problems and develop
research questions to advance science related to improving health outcomes.
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 2019

COLLEGE OF OSTEOPATHIC MEDICINE

OST 601  Transitions II: Classroom to Bedside
Summer of every year. 5 credits. R: Open to graduate-professional students in the College of
Osteopathic Medicine.
Selected topics designed to assist the COM student in transitioning from the classroom to
the clinical learning environment.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester
after the end of the semester of enrollment.
Effective Summer 2019
PART II – NEW COURSES

OST 690  Global Health: Dominican Republic - Clinical Immersion
Fall of every year. Spring of every year. Summer of every year. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Osteopathic Medicine or approval of college.
Observation of and supervised participation in host country’s healthcare delivery system. Etiology, treatment, and control of endemic disease. Exploration of local culture and history.
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 Summer 2019

OST 691  Global Health: Guatemala - Clinical Immersion
Fall of every year. Spring of every year. Summer of every year. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. RB: Fluency in Spanish to interact with patients R: Open to graduate-professional students in the College of Osteopathic Medicine or approval of college.
Observation of and supervised participation in host country’s healthcare delivery system. Etiology, treatment, and control of endemic disease. Tropical disease. Exploration of local culture and history.
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 Summer 2019

OST 692  Global Health: Turkey - Clinical Immersion
Fall of every year. Spring of every year. Summer of every year. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Osteopathic Medicine or approval of college.
Observation of and supervised participation in host country’s healthcare delivery system. Etiology, treatment, and control of endemic disease. Exploration of local culture and history.
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 Summer 2019

OST 693  Global Health: South Korea - Clinical Immersion
Fall of every year. Spring of every year. Summer of every year. 1 to 6 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Osteopathic Medicine or approval of college.
Observation of and supervised participation in host country’s healthcare delivery system. Etiology, treatment, and control of endemic disease. Exploration of local culture and history.
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 Summer 2019
PART II – NEW COURSES

OST 694  Global Health: Nepal - Clinical Immersion
Fall of every year. Spring of every year. Summer of every year. 1 to 6 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Osteopathic Medicine or approval of college. Observation of and supervised participation in host country’s healthcare delivery system. Etiology, treatment, and control of endemic disease. One Health. Exploration of local culture and history. 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 Summer 2019

DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

PHM 492  Pharmacotherapy of Human Viral Infections
Summer of every year. 2(2-0) P: PHM 350 or PHM 483 or approval of department RB: Background in biology, microbiology and / or biochemistry. An integrated and multidisciplinary approach to human viral infections and their pharmacologic treatment. Effective Summer 2019

SCHOOL OF PLANNING, DESIGN AND CONSTRUCTION

UP 868  Planning Resilience against Extreme Events
Spring of every year. 1 to 4 credits. Interdepartmental with Global Urban Studies Program. A student may earn a maximum of 4 credits in all enrollments for this course. Theory on ephemeral planning and contemporary urbanism. Characteristics of disruptive technologies, disaster planning, and mega-events. Case studies of US and international cities in duress and recovery. Strategic and tactical planning, management practices, and ‘winging it’ in a state of exception. Implications for policy, management, operations, and planning. Effective Spring 2020

UP 878  Autonomous Futures: Self-driving Vehicles, Domotics, and Artificial Intelligence in Smart Cities
Fall of every year. 3(3-0) Interdepartmental with Civil Engineering. Characteristics of autonomous systems and emerging technology. Perceptions of people on future transport, mobility, housing, and living. International perspectives on ethics and transitions towards autonomous futures. Implications for engineering, policy, business, and planning. Effective Fall 2019

DEPARTMENT OF PLANT, SOIL AND MICROBIAL SCIENCES

PLP 805  Principals in Plant Pathology
Fall of every year. 2(2-0) RB: (PLP 405) or equivalent course Biodiversity of plant pathogens, molecular plant microbe interactions, microbial ecology, epidemiology, and population genetics of plant pathogens. Effective Fall 2019

DEPARTMENT OF PSYCHOLOGY

PSY 292  Special Topics in Psychology
On Demand. 3(3-0) P: PSY 101 Special topics in psychology proposed by faculty to supplement regular course offerings. Effective Fall 2019
PSY 318  Gender-Based Violence Across the Lifespan  
Summer of every year. 3(3-0) Interdepartmental with Women's Studies. P: PSY 101  
Dynamics, risk factors, and community responses to gender-based violence across the  
lifespan.  
Effective Summer 2019

PSY 497H  Senior Honors Project  
Fall of every year. Spring of every year. 3(0-6) R: Approval of department.  
Capstone experience in psychology for honors student’s project thesis.  
Effective Fall 2019

SCHOOL OF SOCIAL WORK

SW 493A  Social Work Field Education: Integrative Field Seminar I  
Fall of every year. 1(1-0) P: SW 430 or concurrently R: Open to seniors in the School of Social  
Work. C: SW 440 concurrently and SW 494A concurrently.  
Classroom-based integration and application of competencies and concepts in social work  
practice.  
Effective Fall 2019

SW 493B  Social Work Field Education: Integrative Field Seminar II  
Spring of every year. 1(1-0) P: SW 493A and SW 494A R: Open to seniors in the School of Social  
Work. C: SW 441 concurrently and SW 494B concurrently.  
Continuation of classroom-based integration and application of competencies and  
concepts in social work practice.  
Effective Spring 2020
PART III – COURSE CHANGES

DEPARTMENT OF ART, ART HISTORY, AND DESIGN

STA 320  Painting 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 112) P: STA 110 and STA 112 and STA 113 and STA 114
Representational painting of landscape, figure, and still life imagery. Painting concepts, materials, and techniques.
Effective Fall 2015 Effective Spring 2019

STA 340  Ceramics: Hand Building
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
Ceramic processes including handbuilding, with terra cotta clay, low-fire glaze formulation, and kiln firing as a means of cultural and artistic expression.
Effective Fall 2015 Effective Spring 2019

STA 345  Ceramics: Wheel Throwing
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
Ceramics processes including wheel throwing with stoneware clay, high-fire glaze formulation, and kiln firing as a means of cultural and artistic expression.
Effective Fall 2015 Effective Spring 2019

STA 350  Figure Modeling
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
Modeling human and natural forms. The figure as a means of artistic and cultural expression.
Effective Fall 2015 Effective Spring 2019

STA 351  Mixed Media and Installation
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
Exploration of artistic expression using mixed media and assemblage techniques. Installation techniques.
Effective Fall 2015 Effective Spring 2019

STA 354  Casting
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
Casting concepts and techniques as a means of artistic and cultural expression.
Effective Fall 2015 Effective Spring 2019

STA 355  Construction and Fabrication
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
Sculptural concepts using methods of construction and fabrication as an approach to artistic and cultural expression.
Effective Fall 2015 Effective Spring 2019

STA 380  Electronic Art
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 or approval of department) P: STA 110 and STA 112 and STA 113 and STA 114
or approval of department
Using the computer as a tool for making art. Creation of innovative electronic art and new media projects that introduce students to conceptual as well as technical skill sets.
Effective Fall 2015 Effective Spring 2019
STA 391 Special Topics in Drawing
Fall of every year. Spring of every year. Summer of every year. 3(0-6) A student may earn a maximum of 6 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
Issues of technique, style, and content in drawing.
Effective Fall 2014 Effective Spring 2019

STA 891 Special Topics in Art Education
Master of Fine Arts Seminar: Teaching and Pedagogical Practice in Studio Art
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. 3(3-0)
Interdepartmental with Education. A student may earn a maximum of 3 credits in all enrollments for this course. P: Approval of department. R: Open to master of fine arts students in the Master of Fine Arts in Studio Art.
Special topics supplementing regular course offerings proposed by faculty on a group study basis for graduate students. Current issues and practices in Studio Art course/curriculum design. Approaches to course planning, critiques, and assessment. Development of course outcomes and expectations. Role of conceptual, formal, and technical issues. Diversity in studio art pedagogy.
Effective Summer 2001 Effective Fall 2019

STA 893 Master of Fine Arts Professional Seminar
Fall of every year. Spring of every year. 3(3-0) R: Open to master's students in the Department of Art, Art History, and Design or in the Master of Fine Arts in Studio Art. Approval of department.
Contemporary professional issues in the visual arts: reading, writing, presentation, critique and revision, conferences, professional activities, and employment.
Effective Fall 2015 Effective Fall 2019

STA 898 Master of Fine Arts Research
Master of Fine Arts Final Research Project
Fall of every year. Spring of every year. 1 to 8 credits. 2 to 10 credits. A student may earn a maximum of 16 credits in all enrollments for this course. P: STA 896 RB: 12 graduate credits in student's studio art discipline. R: Open only to Master of Fine Arts students in Studio Art. R: Open to master of fine arts students in the Master of Fine Arts in Studio Art.
Individual research project in the student's studio art discipline directed by major professor. Individual final research project in studio art directed by major professor and guidance committee.
Request the use of the Pass-No Grade (P-N) system.
Effective Fall 1996 Effective Fall 2019

COLLEGE OF ARTS AND LETTERS

GSAH 391 Special Topics in Global Studies in the Arts and Humanities
Fall of every year. Spring of every year. Summer of every year. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P: GSAH 220 and GSAH 230 or approval of department P: (GSAH 220 and GSAH 230 or approval of department) or GSAH 201
Special topics supplementing regular course offerings proposed by faculty on a group study basis.
Effective Fall 2016 Effective Spring 2019

DEPARTMENT OF BIOSYSTEMS AND AGRICULTURAL ENGINEERING

CSUS 452 AE 452 Watershed Concepts
Fall of every year. Spring of every year. Summer of every year. 3(3-0) Interdepartmental with Biosystems Engineering and Crop and Soil Sciences and Forestry and Fisheries and Wildlife Interdepartmental with Crop and Soil Sciences and Forestry and Fisheries and Wildlife P: CSUS 354 RB: Organic chemistry
Watershed hydrology and management. The hydrologic cycle, water quality, aquatic ecosystems, and social systems. Laws and institutions for managing water resources. SA: RD 452, ESA 452 SA: ESA 452, RD 452, CSUS 452
Effective Fall 2014 Effective Summer 2019
PART III – COURSE CHANGES

CSUS 841
AE 841  Building and Implementing Watershed Management Plans
Fall of every year. Spring of every year. Summer of every year. 3(3-0)  RB: CSUS 452 or AE 452
Developing and implementing watershed management plans. Problem definition, data
collection, public consultation, and program evaluation.
SA: ACR 841. RD 881  SA: ACR 841, CSUS 841, RD 881
Effective Fall 2014  Effective Summer 2019

CSUS 842
AE 842  Watershed Assessments and Tools
Fall of every year. Spring of every year. Summer of every year. 3(3-0)  RB: CSUS 452 or CSUS 841
RB: AE 452 or AE 841
Assessing and predicting physical, chemical, biological and socioeconomic conditions
within watersheds. Tools and techniques for identifying, evaluating, and prioritizing
problems.
SA: ACR 842, RD 882  SA: ACR 842, CSUS 842
Effective Fall 2014  Effective Summer 2019

CSUS 843
AE 843  Legal, Financial and Institutional Frameworks in Watershed Management
Fall of every year. Spring of every year. Summer of every year. 3(3-0)  RB: CSUS 452 or CSUS 841
or CSUS 842  RB: AE 452 or AE 841 or AE 842
Watershed management laws and regulations. Resolving financial and human conflicts
arising from regulation.
SA: ACR 843  SA: ACR 843, CSUS 843
Effective Fall 2014  Effective Summer 2019

DEPARTMENT OF CHEMICAL ENGINEERING AND MATERIALS SCIENCE

MSE 425  Biomaterials and Biocompatibility
Fall of every year. Spring of every year. 3(3-0) Interdepartmental with Biomedical Engineering. P:
MSE 250 RB: PSL 250 R: Open to juniors or seniors in the College of Engineering.
Materials science of human implants. Design requirements imposed by the human body,
and need for bodily protection.
SA: BME 424, MSE 324
Effective Fall 2015  Effective Fall 2019

COLLEGE OF COMMUNICATION ARTS AND SCIENCES

JRN 921
CAS 921  Media Theory:
Theories of Media and Information
Fall of every year. 3(3-0) Interdepartmental with Advertising and Media and Information,
Interdepartmental with Advertising and Journalism and Media and Information R: Open to doctoral
students.  R: Open to doctoral students in the College of Communication Arts and Sciences or
approval of college.
Process and effects of mediated communication. Audiences, socialization, and
persuasion. Macro-societal, and intercultural perspectives. Theory construction. Overview
of the relations between information theory, communication theory, and media theory, and
an understanding of how these theories have evolved over time and which competing
approaches coexist.
SA: ADV 921
Effective Fall 2015  Effective Fall 2019
PART III – COURSE CHANGES

ADV 975
Quantitative Research Design

Introductory Methods
Fall of every year. 3(3-0) Interdepartmental with Journalism and Media and Information, Interdepartmental with Advertising and Journalism and Media and Information RB: One graduate-level research design or statistics course. R: Open to doctoral students.
- Survey, experimental and content analytic techniques applied to the study of media.
- Academic and applied research methods. Univariate and multivariate techniques. A survey of qualitative and quantitative research design including validity and reliability, hypothesis formation, sampling, ethics, survey, experimental, ethnographic, observational and mixed methods.

Effective Fall 2015 Effective Fall 2019

CAS 975
CAS 975 Quantitative Research Design Introductory Methods
Fall of every year. 3(3-0) Interdepartmental with Journalism and Media and Information, Interdepartmental with Advertising and Journalism and Media and Information RB: One graduate-level research design or statistics course. R: Open to doctoral students.
- Survey, experimental and content analytic techniques applied to the study of media.
- Academic and applied research methods. Univariate and multivariate techniques. A survey of qualitative and quantitative research design including validity and reliability, hypothesis formation, sampling, ethics, survey, experimental, ethnographic, observational and mixed methods.

Effective Fall 2015 Effective Fall 2019

CAS 992
Doctoral Seminar
Fall of every year. Spring of every year. Summer of every year. 3(3-0) Interdepartmental with Advertising and Journalism and Media and Information. A student may earn a maximum of 15 credits in all enrollments for this course. R: Open only to doctoral students in the Media and Information Studies major or Department of Communication or approval of college. R: Open to doctoral students in the College of Communication Arts and Sciences or approval of college.
- Topics on theoretical and research issues in communication and mass media.

Effective Fall 1992 Effective Fall 2019

CAS 993
Research Internship
Research Practicum in Information and Media
Fall of every year. Spring of every year. Summer of every year. 1 credit. 1 to 3 credits. Interdepartmental with Advertising and Journalism and Media and Information. A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to doctoral students in the Media and Information Studies major. R: Open to doctoral students in the College of Communication Arts and Sciences or approval of college.
- Participation in faculty research projects. Directed research collaboration with a faculty member or a team of students/faculty.

Effective Fall 1992 Effective Fall 2019

DEPARTMENT OF COMMUNITY SUSTAINABILITY

CSUS 422
Youth Leadership: Theory and Practice
CSUS 860 Educational Theory and Application of Experiential Learning in ANR
Summer of even years. 3(3-0) RB: CSUS 322 R: Not open to freshmen or sophomores.
- Foundations of theory and practice in youth leadership. Youth development and leadership in families, schools, organizations and communities. Review of youth organizations at the local, state, national, and international levels. Field trip required. Foundations of theory and practice in youth leadership. Youth development and leadership in families, schools, organizations, and communities. Review of youth organizations at the local, state, national, and international levels. Field trips required. SA: CSUS 422

Effective Summer 2015 Effective Fall 2019

CSUS 423
CSUS 861 Educational Theory and Application of Experiential Learning in AFNR
SUMMER OF COMMUNITY SUSTAINABILITY

CSUS 861 Educational Theory and Application of Experiential Learning in ANR
CSUS 422 Educational Theory and Application of Experiential Learning in AFNR
Summer of odd years. 3(3-0) RB: CSUS 322 or CSUS 422 R: Not open to freshmen or sophomores.
- Foundations of experiential learning. Experiential learning within the context of families, schools, organizations and communities as a function of an educational system. Application of experiential learning within formal and nonformal educational settings. Field trips required. Foundations of experiential learning in theory and practice. Experiential learning within the context of families, schools, organizations and communities as a function of an educational system. Application of experiential learning within formal and nonformal educational settings. Field trips required. SA: CSUS 423

Effective Summer 2017 Effective Fall 2019
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CSE 410  Operating Systems
Fall of every year. Spring of every year. 3(3-0) P: (CSE 232 and CSE 260) and (CSE 320 or ECE 331) P: (CSE 232 and CSE 260) and CSE 325 R: Open to juniors or seniors in the College of Engineering or in the Computer Science Minor or in the Lyman Briggs Computer Science Coordinate Major or in the Lyman Briggs Computer Science Major or in the Computer Science Disciplinary Teaching Minor.
SA: CPS 410
Effective Fall 2017 Effective Fall 2019

CSE 422  Computer Networks
Fall of every year. Spring of every year. 3(3-0) P: (STT 351 or ECE 280) and (CSE 410 or concurrently) P: (STT 351 or ECE 280 or STT 430 or STT 441) and CSE 325 R: Open to juniors or seniors in the College of Engineering or in the Computer Science Minor or in the Lyman Briggs Computer Science Coordinate Major or in the Lyman Briggs Computer Science Major.
SA: CPS 422
Effective Fall 2017 Effective Fall 2019

CSE 498  Collaborative Design (W)
Fall of every year. Spring of every year. 4(2-4) P: ((CSE 420 or CSE 422 or CSE 425 or CSE 435 or CSE 440 or CSE 450) or (CSE 460 or CSE 471 or CSE 472 or CSE 473 or CSE 480 or CSE 484)) and (CSE 335 and CSE 410) and completion of Tier I writing requirement) P: (CSE 402 or CSE 415 or CSE 422 or CSE 431 or CSE 440 or CSE 450 or CSE 471 or CSE 476 or CSE 477 or CSE 482) and (CSE 402 or CSE 420 or CSE 425 or CSE 435 or CSE 440 or CSE 450 or CSE 472 or CSE 477 or CSE 480 or CSE 482) and (CSE 335 and completion of Tier I writing requirement) and (CSE 325 or CSE 410) R: Open to students in the Computer Science Major or in the Lyman Briggs Computer Science Coordinate Major.
Development of a comprehensive software and/or hardware solution to a problem in a team setting with emphasis on working with a client. Participation in a design cycle including specification, design, implementation, testing, maintenance, and documentation. Issues of professionalism, ethics, and communication.
SA: CSE 449, CSE 478, CSE 479
Effective Fall 2015 Effective Fall 2019

DEPARTMENT OF COUNSELING, EDUCATIONAL PSYCHOLOGY, AND SPECIAL EDUCATION

CEP 944B  Teaching Practicum in Rehabilitation Counselor Education
Teaching Internship in Rehabilitation Counselor Education
Fall of every year. Spring of every year. Summer of every year. 3(0-12) R: Open only to Ph.D. students in Rehabilitation Counselor Education. R: Open to doctoral students in the Rehabilitation Counselor Education Major.
Course design and teaching experience under the direct supervision of a faculty member.
Effective Fall 2005 Effective Summer 2019

CEP 944C  Clinical Practice Practicum in Rehabilitation Counseling
Fall of every year. Spring of every year. Summer of every year. 3(0-6) 6(3-12) R: Open to doctoral students in the Rehabilitation Counselor Education Major.
Supervised counseling experience in human services, rehabilitation or educational settings to further develop skills, knowledge, and behaviors appropriate for professional counseling practice.
Effective Spring 2015 Effective Summer 2019
CEP 944D
Clinical Supervision Practicum in Rehabilitation Counselor Education
Clinical Supervision Internship in Rehabilitation Counselor Education
Fall of every year. Spring of every year. Summer of every year. 3(1-6) A student may earn a
maximum of 6 credits in all enrollments for this course. R: Open only to Ph.D. students in the
Rehabilitation Counselor Education major. R: Open to doctoral students in the Rehabilitation
Counselor Education Major.
Theory and practice of supervising prospective counselors. Approaches, models, and
strategies.
Effective Fall 2005 Effective Summer 2019

SCHOOL OF CRIMINAL JUSTICE

CJ 220
Criminology
Fall of every year. Spring of every year. 3(3-0) Interdepartmental with Sociology. P: CJ 110 or
(SOC 100 or concurrently) R: Open to students in the Sociology Major or in the Criminal Justice
Major or approval of school. R: Open to students in the Peace and Justice Studies Minor or in the
Sociology Major or in the Youth and Society Minor or in the Criminal Justice Major or in the Law,
Justice, and Public Policy Minor or in the Conservation and Environmental Law Enforcement Minor
or approval of school.
Introduction to the socio-legal foundation of crime. Crime typology and measurement
Effective Spring 2014 Effective Spring 2019

CJ 292
Methods of Criminal Justice Research
Fall of every year. Spring of every year. 3(3-0) P: ((STT 200 or concurrently) or (STT 201 or
concurrently)) and (CJ 220 or concurrently) P: (STT 200 or concurrently) or (STT 201 or
concurrently) R: Not open to freshmen and open to students in the School of Criminal Justice.
Logic, design, analysis, and ethical principles in criminal justice research. Indicators of
crime and its control.
Effective Spring 2014 Effective Fall 2019

CJ 335
Policing
Fall of every year. Spring of every year. 3(3-0) P: CJ 292 or concurrently P: CJ 110 and CJ 220 R:
Open to juniors or seniors in the Criminal Justice Major. R: Open to juniors or seniors in the
Criminal Justice Major or in the Conservation and Environmental Law Enforcement Minor.
Roles, responsibilities, issues, and trends pertinent to contemporary law enforcement
organizations in contemporary society.
Effective Spring 2014 Effective Fall 2019

CJ 355
Juvenile Justice
Fall of every year. Spring of every year. 3(3-0) P: CJ 292 or concurrently P: Open to juniors or
seniors in the Criminal Justice Major. R: Open to juniors or seniors in the Peace and Justice
Studies Minor or in the Criminal Justice Major.
The juvenile justice system and law. Theories of juvenile delinquency and deviance.
Sociological, psychological, and anthropological perspectives.
Effective Spring 2014 Effective Fall 2019

CJ 365
Corrections
Fall of every year. Spring of every year. 3(3-0) P: CJ 292 or concurrently P: CJ 110 and CJ 220 R:
Open to juniors or seniors in the Criminal Justice Major.
Historical and contemporary views of offender management and treatment. Corrections
system operation. Effects of institutionalization. Alternatives to incarceration.
Effective Spring 2014 Effective Fall 2019

CJ 385
Private Security
Fall of every year. 3(3-0) P: CJ 292 or concurrently P: CJ 110 and CJ 220 R: Open to juniors or
seniors in the Criminal Justice Major. R: Open to juniors or seniors in the Criminal Justice Major or
in the Security Management Minor.
Relationships of private protective services with public law enforcement. Individuals,
businesses, and governments providing prevention, protection, investigation, and disaster
recovery services. Protection of persons, property, and information.
Effective Spring 2014 Effective Fall 2019
PART III – COURSE CHANGES

CJ 424  Crime, Mass Media, and Society  (W)
Spring of even years, Spring of every year. 3(3-0) R: Open to seniors in the School of Criminal Justice.
Effective Spring 2014 Effective Fall 2019

CJ 425  Women and Criminal Justice
Spring of even years, Spring of every year. 3(3-0) Interdepartmental with Women's Studies. P: CJ 410 R: CJ 220 or WS 201 R: Open to juniors or seniors.
Theories on women's victimization and criminality. Women's experiences as victims, offenders, and criminal justice employees. Laws and their effects on the rights of women in the criminal justice system.
Effective Spring 2014 Effective Fall 2019

CJ 427  Criminology and Public Policy  (W)
Fall of every year. 3(3-0) P: (CJ 110 and CJ 220) and completion of Tier I writing requirement P: (CJ 110 and CJ 220) and completion of Tier I writing requirement R: Open to juniors or seniors in the School of Criminal Justice, R: Open to juniors or seniors in the Criminal Justice Major.
Advanced study of criminological theory. Examination of policies implied by different theories of crime. Evaluation of crime control policies.
Effective Spring 2014 Effective Fall 2019

CJ 430  Advanced Seminar in Policing  (W)
Fall of every year. 3(3-0) P: (CJ 335) and completion of Tier I writing requirement P: (CJ 110 and CJ 220 and CJ 335) and completion of Tier I writing requirement R: Open to juniors or seniors in the School of Criminal Justice, R: Open to juniors or seniors in the Criminal Justice Major.
Effective Spring 2014 Effective Fall 2019

CJ 439  Homeland Security
Fall of every year, Spring of every year. 3(3-0) P: CJ 110 R: Open to juniors or seniors in the Defense Studies and Leadership Minor or in the Criminal Justice Major.
Effective Spring 2014 Effective Fall 2019

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

ECE 410  VLSI Design
Spring of every year. 4(3-3) P: ECE 302 and ECE 303 and ECE 230 P: ECE 230 and ECE 303 and ECE 377 R: Open to juniors or seniors or graduate students in the College of Engineering.
SA: EE 410
Effective Fall 2013 Effective Fall 2019

ECE 446  Biomedical Signal Processing
Fall of odd years. 3(3-0) P: ECE 366 RB: Basic linear systems and probability theory. R: Open to students in the Department of Electrical and Computer Engineering. R: Open to students with credit in ECE 466.
Deterministic and random digital signal processing theory in the context of biomedical applications with computer projects on the analysis of real physiologic signals.
Effective Fall 2013 Effective Fall 2019
PART III – COURSE CHANGES

ECE 466  Digital Signal Processing and Filter Design
Fall of every year. Spring of every year. 3(3-0) P: ECE 366 R: Open to seniors or graduate students in the College of Engineering. Not open to students with credit in ECE 446.
SA: EE 466
Effective Fall 2013 Effective Fall 2019

ECE 477  Microelectronic Fabrication
Fall of every year. 3(2-3) P: ECE 303 P: ECE 303 and ECE 377 R: Open to juniors or seniors in the College of Engineering.
Microelectronic processing fundamentals and simulations. Comparison of current microfabrication technologies and their limitations.
SA: ECE 483
Effective Fall 2016 Effective Fall 2019

COLLEGE OF ENGINEERING

EGR 100  Introduction to Engineering Design
Fall of every year. Spring of every year. Summer of every year. 2(1-2) P: ((MTH 116 or concurrently) or (MTH 132 or concurrently) or (MTH 152H or concurrently) or (LB 118 or concurrently)) and (WRA 1004 or designated score on English Placement test ) P: ((MTH 116 or concurrently) or (MTH 132 or concurrently) or (MTH 152H or concurrently) or (LB 117 or concurrently) or (LB 118 or concurrently)) and (WRA 1004 or designated score on English Placement test ) R: Open to students in the College of Engineering or in the Entrepreneurship & Innovation Minor and open to students in the Lyman Briggs College. R: Open to students in the College of Engineering or in the Entrepreneurship and Innovation Minor and open to students in the Lyman Briggs College.
Engineering design process as modeled by team-based, interdisciplinary design projects. Roles of engineers and the contributions of engineering in society. Project management, creativity and design of products and processes to specified outcomes under specified constraints. Introduction to computing tools and physical equipment in support of engineering design. Engineering ethics. Oral and written technical communications.
Effective Spring 2016 Effective Fall 2019

DEPARTMENT OF FINANCE

FI 473  Debt and Money Markets
Fall of every year. Spring of every year. 3(3-0) P: FI 311 P: FI 312 R: Open to students in the Eli Broad College of Business and The Eli Broad Graduate School of Management.
Role and nature of international debt and money markets. Corporate and government bond valuation, fixed income derivative instruments and bond portfolio management. Special role of “time” in debt and money markets.
Effective Spring 2013 Effective Spring 2019

DEPARTMENT OF FORESTRY

FW 419

FOR 419  Applications of Geographic Information Systems to Natural Resources Management
Spring of every year. 4(2-4) Interdepartmental with Biosystems Engineering and Forestry and Geography, Interdepartmental with Biosystems Engineering and Fisheries and Wildlife and Geography RB: GEO 221
Application of geographic information systems, remote sensing, and global positioning systems to integrated planning and management for fish, wildlife, and related resources.
Effective Fall 2014 Effective Summer 2019
DEPARTMENT OF HISTORY

HST 415  The First World War
Fall of every year. 3(3-0)
Causes of World War I, conduct of the war, and its consequences. Political, diplomatic, economic and social factors. Technological and cultural aspects.
SA: HST 415
Effective Fall 2015 Effective Fall 2019

HST 414  World War II: Causes, Conduct and Consequences
Spring of every year. 3(3-0) R: Not open to freshmen.
Causes of World War II, conduct of the war and its consequences. Political, diplomatic, economic and social factors as well as technological and artistic aspects.
SA: HST 414
Effective Fall 2014 Effective Fall 2019

DEPARTMENT OF HORTICULTURE

HRT 203  Principles of Horticulture
Introduction to Horticulture
Fall of every year. 3(2-2)
SA: HRT 201
Effective Fall 2014 Effective Fall 2019

HRT 204  Plant Propagation
Plant Propagation and Use
Spring of every year. 2(2-3) 3(2-2)
SA: HRT 204L, HRT 104
Effective Fall 2014 Effective Fall 2019

HRT 218  Irrigation Systems for Horticulture
Spring of every year. 3(2-2) 2(2-0) R: Open to undergraduate students or agricultural technology students.
Design, installation and maintenance of irrigation systems for turfgrass and landscape plants. Design hydraulics, equipment selection, pump stations, water features, water quality and conservation. Best management practices, water quality and conservation for irrigation systems for horticultural crops.
Effective Spring 2015 Effective Fall 2019

HRT 332  Tree Fruit Production and Management
Fall of every year. 3(2-2) P: HRT 203 or HRT 251 P: HRT 203 or PLB 105 or PLB 203
Commercial apple, cherry, peach, and pear production. Cultural practices to manipulate growth and development and optimize fruit yields and quality. Field trips required.
Effective Fall 2017 Effective Fall 2019

HRT 812  Laboratory Research Techniques
Fall of every year. Fall of even years. 2(1-3) R: Open to graduate students in the Department of Horticulture.
Demonstration and experience using various research techniques.
Effective Summer 2011 Effective Fall 2019
SCHOOL OF HUMAN RESOURCES AND LABOR RELATIONS

HRLR 410 Voice and Democracy at Work
Spring of every year. 3(3-0) P: HRLR 201 P: HRLR 313 or HRLR 314
Collective action by workers. Worker voice and democracy within and outside of work organizations. Historical and current examples.
Effective Spring 2018 Effective Spring 2020

DEPARTMENT OF INTEGRATIVE BIOLOGY

IBIO 303 Oceanography
Fall of every year. 4(4-0) Interdepartmental with Geological Sciences. P: (CEM 141 or CEM 181H or LB 171 or CEM 151) and (PHY 231 or PHY 183 or PHY 193H or LB 273 or PHY 183B or PHY 231C) P: (CEM 141 or CEM 181H or LB 171 or CEM 151) and (PHY 231 or PHY 183 or PHY 193H or LB 273 or PHY 183B or PHY 231C or PHY 241)
Physical, chemical, biological, and geological aspects of oceanography: ocean circulation, waves, tides, air-sea interactions, chemical properties of ocean water, ocean productivity, shoreline processes, and sediments.
SA: ZOL 303
Effective Fall 2016 Effective Spring 2018

IBIO 368 Zoo Animal Biology and Conservation
Summer of every year. 3(3-0) Interdepartmental with Animal Science and Fisheries and Wildlife and Landscape Architecture. P: BS 162 or approval of department P: BS 162 or LB 144 or BS 182H or approval of department RB: Previous work in biology
Captive animal biology including illustrated examples of care, behavioral welfare and conservation work.
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 Effective Spring 2018

MSU COLLEGE OF LAW

LAW 508C Corporate Income Tax
Fall of every year. 2 to 4 credits. 0 to 6 credits. P: LAW 501A or LAW 501B P: LAW 501A or LAW 501B or LAW 501K P: Open to students in the MSU College of Law. R: Open to Law students or law advanced students or law lifelong students or law non-degree students.
This course focuses on federal income tax of corporations & shareholders. Tax consequences of choice of entity. Emphasis will be placed on tax aspects of S-Corporation. Federal income tax of corporations and shareholders. Tax consequences of choice of entity. Tax aspects of S-Corporation.
SA: DCL 465
Effective Spring 2006 Effective Summer 2019

LAW 519 Partnership Tax
Spring of every year. 2 to 4 credits. 0 to 6 credits. P: (LAW 501A or LAW 501B) and LAW 500M P: (LAW 501A or LAW 501B or LAW 501K) and LAW 500M P: Open to students in the MSU College of Law. R: Open to Law students or law advanced students or law lifelong students or law non-degree students.
This course focuses on tax issues associated with form, term, liquidation, transfer and class problems. Tax issues associated with form, term, liquidation, transfer and class problems.
SA: DCL 316
Effective Spring 2006 Effective Summer 2019
**PART III – COURSE CHANGES**

**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  Effective Summer 2019

**LAW 579R**  Law and Interpretation  
Fall of every year. Spring of every year. Summer of every year. 1 to 4 credits. 0 to 6 credits.  
P: LAW 500C  
R: Open to Law students or master’s of law students or law lifelong students or law non-degree students in the MSU College of Law.  
R: Open to Law students or law advanced students or law lifelong students or law non-degree students in the MSU College of Law.  
**Judicial interpretation under the constitution, statutes and common law. Judicial interpretation under the constitution, statutes and common law.**  
Effective Fall 2007  Effective Summer 2019

**DEPARTMENT OF LINGUISTICS AND GERMANIC, SLAVIC, ASIAN AND AFRICAN LANGUAGES**

**ARB 460**  Special Topics in Arabic Culture (W)  
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: (ARB 302 or approval of department) and Completion of Tier I Writing Requirement  
R: (ARB 202 or approval of department) and completion of Tier I Writing Requirement  
RB: ARB 360  
**Special topics in Arabic culture determined each semester by Arabic teaching faculty.**  
Effective Spring 2015  Effective Fall 2019

**ARB 461**  Introduction to Arabic Literature (W)  
Fall of every year. Spring of every year. 3(3-0)  
P: (ARB 302 or approval of department) and completion of Tier I Writing requirement  
R: (ARB 202 or approval of department) and completion of Tier I writing requirement  
RB: ARB 360  
**Survey of Arabic literature from the pre-Islamic period to the present, focusing on the modern period. Readings selected from eminent texts which will be read and discussed in Arabic. Readings of various literary genres selected from modern and pre-modern Arabic literature including different themes such as regional, diaspora, and travel literature; literature in translation. These literary works will be read and discussed in Arabic and English.**  
Effective Spring 2015  Effective Fall 2019

**LLT 855**  Language Identity and Ideology in Multilingual Settings  
Spring of every year. 3 credits.  
**A student may earn a maximum of 3 credits in all enrollments for this course.**  
P: Open to graduate students in the Department of Linguistics and Germanic, Slavic, Asian and African Languages or in the Second Language Studies Major or in the Teaching English to Speakers of Other Languages Major.  
R: Open to graduate students in the College of Education or in the Department of Linguistics and Germanic, Slavic, Asian and African Languages or in the Second Language Studies Major or in the Teaching English to Speakers of Other Languages Major.  
**Current debates on the relationship between language, identity, and ideology. Theories of identity and ideology related to a variety of educational settings. Negotiation of identity and ideology with respect to social relationships between writer and reader, teacher and student, classroom and community.**  
Effective Fall 2015  Effective Spring 2019
DEPARTMENT OF MATHEMATICS

MTH 100E  Intermediate Algebra Workshop for the Mathematics Enrichment Program
Fall of every year. Spring of every year. 1(0-4) R: Approval of department. C: MTH 1825 concurrently.
Enrichment topics in intermediate algebra for students in the Mathematics Enrichment Program.
Request the use of the Pass-No Grade (P-N) system.
DELETE COURSE
Effective Fall 2018

MTH 103E  College Algebra Workshop for the Mathematics Enrichment Program
Fall of every year. Spring of every year. 1(0-4) R: Approval of department. C: MTH 103 concurrently.
Enrichment topics in college algebra for students in the Mathematics Enrichment Program.
Request the use of the Pass-No Grade (P-N) system.
DELETE COURSE
Effective Fall 2018

MTH 110  Finite Mathematics and Elements of College Algebra
Fall of every year. Spring of every year. Summer of every year. 5(5-0) P: (MTH 1825) or designated score on Mathematics Placement test Not open to students with credit in MTH 112.
DELETE COURSE
Effective Fall 2018

MTH 112  Finite Mathematics: Applications of College Algebra
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (MTH 103) or designated score on Mathematics Placement test Not open to students with credit in MTH 110.
Combinatorics, probability and statistics, mathematics of finance, geometry, transition matrices, and linear programming. The course emphasizes applications and includes work using spreadsheets.
SA: MTH 106
DELETE COURSE
Effective Fall 2018

MTH 1825  Intermediate Algebra
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or MTH 124 or MTH 132 or MTH 152H or LB 118) or designated score on Mathematics Placement test P: (MTH 103 or MTH 110 or MTH 124 or MTH 132 or MTH 152H or LB 118 or MTH 101 or MTH 102) or designated score on Mathematics Placement test R: Open to students in the Child Development major or in the Education Major or in the Special Education-Learning Disabilities Major or in the Teacher Certification Internship Year Studies Program.
DELETE COURSE
Effective Fall 2018

MTH 201  Elementary Mathematics for Teachers I
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or MTH 124 or MTH 132 or MTH 152H or LB 118) or designated score on Mathematics Placement test P: (MTH 103 or MTH 110 or MTH 124 or MTH 132 or MTH 152H or LB 118 or MTH 101 or MTH 102) or designated score on Mathematics Placement test R: Open to students in the Child Development major or in the Education Major or in the Special Education-Learning Disabilities Major or in the Teacher Certification Internship Year Studies Program.
Mathematics needed for K-8 teaching. Place value and models for arithmetic, mental math, word problems, and algorithms. Factors, primes, proofs, and prealgebra.
Fractions, ratios, rates, and percentages. Negative, rational, and real numbers. Special emphasis on the appropriate sequential order for teaching.
Effective Fall 2013  Effective Spring 2019
COLLEGE OF NURSING

NUR 930  Methods In Clinical Research
Fall of every year. Summer of every year. 3(3-0) P: NUR 924 and NUR 939 or approval of college
R: Open to doctoral students in the College of Nursing or approval of college.
Advanced research designs, measurement and data collection strategies for a broad range of behavioral and health disciplines relevant to wellness, risk reduction, and chronic illness.
Effective Fall 2018 Effective Summer 2019

NUR 975  Clinical Anesthesia Practicum I
Fall of every year. 2(0-16) 3(0-24) P: NUR 974 R: Open to doctoral students in the College of Nursing or in the Nursing Practice Major.
Integration of theory with practice in a clinical and simulated setting with emphasis on basic principles of anesthesia and professional standards of practice for the certified registered nurse anesthetist.
Request the use of the Pass-No Grade (P-N) system.
Effective Fall 2018 Effective Summer 2019

NUR 976  Clinical Anesthesia Practicum II
Spring of every year. 3(0-24) 2(0-16) P: NUR 975 R: Open to doctoral students in the College of Nursing or in the Nursing Practice Major.
Supervised instruction in the clinical management of patients receiving all types of anesthesia in a variety of clinical settings.
Request the use of the Pass-No Grade (P-N) system.
Effective Fall 2018 Effective Summer 2019

COLLEGE OF OSTEOPATHIC MEDICINE

OST 582  Transitions: From the Classroom to the Bedside
Transitions I: Board Preparation
Summer of every year. 5 credits. 6 credits. R: Open to graduate-professional students in the College of Osteopathic Medicine.
Selected topics in preparation for clinical education Selected topics in preparation for licensure board exams.
Request the use of the Pass-No Grade (P-N) system.
Effective Summer 2018 Effective Summer 2019

OST 686  Clinical Clerkship in Merida, Mexico
Global Health: Mexico - Clinical Immersion
Fall of every year. Spring of every year. Summer of every year. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course. P: IM 618 or approval of college RB: Fluency in Spanish to interact with patients R: Open to graduate-professional students in the College of Osteopathic Medicine R: Open to graduate-professional students in the College of Osteopathic Medicine or approval of college.
Clerkship experiences in Mexican healthcare institutions and healthcare delivery systems. Includes introduction to common diseases and treatments, as well as cultural aspects of Mexican healthcare. Observation of and supervised participation in host country’s healthcare delivery system. Etiology, treatment, and control of endemic disease. Exploration of local culture and history.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment. 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 Summer 2013 Effective Summer 2019
OST 687

**Peru Medical Service**

Global Health: Peru - Clinical Immersion

Fall of every year. Spring of every year. Summer of every year. **3 to 6 credits, 1 to 20 credits.** A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 30 credits in all enrollments for this course. R: Fluency in Spanish to interact with patients. R: Open to graduate-professional students in the College of Osteopathic Medicine. R: Open to graduate-professional students in the College of Osteopathic Medicine or approval of college.

Healthcare services under the supervision of licensed U.S. physicians working in tandem with local providers. Offered second half of semester. Observation of and supervised participation in host country's healthcare delivery system. Etiology, treatment, and control of endemic disease. Exploration of local culture and history. Offered second half of semester.

Request the use of the Pass-No Grade (P-N) system.

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 2016 Effective Summer 2019**

OST 688

**Cuban Health Care System and Culture**

Global Health: Cuba - Clinical Immersion

Fall of every year. Spring of every year. Summer of every year. **3 to 6 credits, 1 to 20 credits.** A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 30 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Osteopathic Medicine. R: Open to graduate-professional students in the College of Osteopathic Medicine or approval of college.

On site observation of healthcare delivery in community health clinics, maternal health, pediatric care, and geriatric care. In patient care in teaching hospitals in Havana, Cuba. Offered second half of semester. Observation of and supervised participation in host country’s healthcare delivery system. Etiology, treatment, and control of endemic disease. Exploration of local culture and history.

Request the use of the Pass-No Grade (P-N) system.

The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.

**Effective Spring 2017 Effective Summer 2019**

OST 689

**Global Health and Culture in Haiti**

Global Health: Haiti - Clinical Immersion

Fall of every year. Spring of every year. Summer of every year. **3 to 6 credits, 1 to 20 credits.** A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 30 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. 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. Observation of and supervised participation in host country’s healthcare delivery system. Etiology, treatment, and control of endemic disease. Exploration of local culture and history.

Request the use of the Pass-No Grade (P-N) system.

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 Effective Summer 2019**

DEPARTMENT OF ROMANCE AND CLASSICAL STUDIES

PRT 150

**Portuguese for Speakers of Other Romance Languages I**

Intensive Beginning Portuguese

Fall of every year. **4(4-0) 5(5-0) RB: Solid background in another Romance language. Not open to students with credit in PRT 101 or PRT 102.** Development of listening, speaking, reading, writing skills, and cultural knowledge.

**Effective Spring 2015 Effective Fall 2019**
PRT 250  Portuguese for Speakers of Other Romance Languages II
Intensive Intermediate Portuguese
Spring of every year. 4(4-0) 5(5-0) P: PRT 150 or PRT 102 RB: Solid background in another Romance language Not open to students with credit in PRT 201 or PRT 202.
Continued development of listening, speaking, reading, writing skills, and cultural knowledge.
Effective Spring 2015 Effective Fall 2019

DEPARTMENT OF PSYCHOLOGY

PSY 295  Data Analysis in Psychological Research
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (((MTH 103) or designated score on Mathematics Placement test) and (MTH 101 or MTH 102 or MTH 112 or MTH 114 or MTH 124 or MTH 132 or MTH 152H or STT 200 or STT 201)) or (MTH 110 or MTH 116)) and PSY 101 P: (((MTH 103) or designated score on Mathematics Placement test) and (MTH 101 or MTH 102 or MTH 114 or MTH 124 or MTH 132 or MTH 152H or STT 200 or STT 201)) or MTH 116) and PSY 101 Not open to students with credit in STT 315.
Descriptive and inferential statistics as applied to the analysis of psychological research. Measurement, control, and research design with psychological variables. Data analysis. Interpreting research findings. Relations between research and theory.
Effective Fall 2018 Effective Fall 2019

PSY 371  Psychological Innovations and Research I
Fall of every year. Spring of every year. Summer of every year. 4(2-4) 3(2-2) P: PSY 101 RB: To receive credit in PSY 371, the student must satisfactorily complete Psychology 372 unless there is an exception given by the instructor. R: Approval of department; application required.
First course of two-semester sequence. Theoretical and technical background and direct involvement in a major psychological innovation or research project. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
Effective Fall 2014 Effective Fall 2019

PSY 372  Psychological Innovations and Research II
Fall of every year. Spring of every year. Summer of every year. 4(2-4) 3(2-2) P: PSY 371 R: Approval of department; application required.
Second course of a two-course sequence. Theoretical and technical background and direct involvement in a major psychological innovation or research project
Effective Fall 2014 Effective Spring 2020

PSY 409  Psychobiology of Behavioral Development (W)
Spring of every year. 3(3-0) P: (PSY 209 or ZOL 402) and ((PSY 295 or STT 231) and completion of Tier I writing requirement) P: (PSY 209 or NEU 300 or IBIO 405) and ((PSY 295 or STT 231) and completion of Tier I writing requirement)
Biological approaches to the understanding of behavioral development in human and non-human animals. Role of the nervous system in this process.
Effective Fall 2014 Effective Summer 2019

PSY 410  Neuroscience of Learning and Memory  (W)
Fall of every year. 3(3-0) P: (PSY 200 or PSY 209 or PSY 301 or ZOL 402) and ((PSY 295 or STT 231) and completion of Tier I writing requirement) P: (PSY 200 or PSY 209 or PSY 301 or NEU 300 or IBIO 405) and ((PSY 295 or STT 231) and completion of Tier I writing requirement)
Neural mechanisms responsible for learning and memory. SA: PSY 308
Effective Summer 2015 Effective Summer 2019

PSY 411  Hormones and Behavior (W)
Spring of every year. 3(3-0) P: (PSY 209 or ZOL 402) and ((PSY 295 or STT 231) and completion of Tier I writing requirement) P: (PSY 209 or NEU 300 or IBIO 405) and ((PSY 295 or STT 231) and completion of Tier I writing requirement)
Current research on biological mechanisms that control motivation in humans and non-human species.
Effective Fall 2014 Effective Summer 2019
PSY 492  
Special Topics in Psychology
Advanced Topics in Psychology
Fall of every year, Spring of every year, On Demand, 4 to 3 credits, 3(3-0) P: PSY 101 and PSY 295 P: (PSY 101) and (PSY 295 or STT 231)
Special topics supplementing regular course offerings proposed by faculty. Advanced topics proposed by faculty to supplement regular course offerings.
Effective Fall 2014 Effective Summer 2019

PSY 801  
Sensation and Perception
Fall of every year, Fall of odd years, 3(3-0) RB: (PSY 401) or approval of department. R: Open to graduate students in the Department of Psychology.
Biological and psychological approaches to the study of extraction, representation, and interpretation of sensory information. Review of major methodologies. Emphasis on vision.
Biological, psychological, and computational approaches to the study of extraction, representation, and interpretation of sensory information. Review of major methodologies. Emphasis on vision.
Effective Spring 2010 Effective Fall 2019

PSY 802  
Basic Cognitive Processes
Fall of every year, Spring of even years, 3(3-0) R: Open only to graduate students in the Department of Psychology or Interdepartmental Graduate Specializations in Cognitive Science or approval of department. R: Open to graduate students in the Department of Psychology or in the Cognitive Science Specialization or approval of department.
Advanced exploration of methods used to study human cognition as applied to sensory processes, perception, attention, memory, and control of action
SA: PSY 810
Effective Fall 2001 Effective Fall 2019

PSY 803  
Higher Order Cognitive Processes
Spring of every year, Spring of odd years, 3(3-0) R: Open only to graduate students in the Department of Psychology or Interdepartmental Graduate Specializations in Cognitive Science or approval of department. R: Open to graduate students in the Department of Psychology or in the Cognitive Science Specialization or approval of department.
Advanced exploration of inductive and deductive reasoning, categorization, analogy, decision making, and problem solving
SA: PSY 810
Effective Spring 2003 Effective Fall 2019

SCHOOL OF SOCIAL WORK

SW 310  
Human Behavior and Social Environment
Fall of every year. 3(3-0) P: (SOC 100 and PSY 101 and SW 200) and (HNF 150 or PSY 209 or PSL 250) and (PSY 200 or PSY 235 or PSY 236 or PSY 244 or PSY 270 or PSY 280 or PSY 371) P: (SOC 100 and PSY 101 and SW 200) and (HNF 150 or PSY 209 or PSL 250 or MMG 141) and (PSY 200 or PSY 235 or PSY 236 or PSY 244 or PSY 270 or PSY 280 or PSY 371) R: Open to juniors or seniors in the School of Social Work or approval of school. C: SW 320 concurrently.
Integration of general systems, ecological, and developmental theories within the context of lifespan development. Integration of biological, psychological, structural, environmental, and socio-cultural perspectives.
Effective Fall 2012 Effective Fall 2019

SW 430  
Research Methods in Social Work I
Fall of every year. Summer of every year. 4(3-2) P: MTH 110 or MTH 114 or MTH 116 or MTH 124 or MTH 132 or MTH 201 or MTH 152H or STT 200 or STT 201 or MTH 112 or approval of school P: (MTH 114 or MTH 116 or MTH 124 or MTH 132 or MTH 152H or STT 200 or STT 201 or approval of school) or (MTH 101 and MTH 102) or (MTH 101 and MTH 103) or (MTH 102 and MTH 103) R: Open to juniors or seniors or graduate students in the School of Social Work.
Research processes employing quantitative methods in the measurement of outcomes of social work intervention.
Effective Fall 2012 Effective Summer 2019
SW 494A  Social Work Field Education: Undergraduate Generalist Practice I  
Fall of every year. 5(1-16) 4(0-16) 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 Summer 2019 Effective Fall 2019

SW 494B  Social Work Field Education: Undergraduate Generalist Practice II  
Spring of every year. 5(1-16) 4(0-16) 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 Summer 2019 Effective Spring 2020

DEPARTMENT OF SOCIOLOGY

SOC 161  International Development and Change  
Fall of every year, Spring of every year, Summer of every year. 3(3-0) 
Effective Spring 2014 Effective Fall 2019

SOC 214  Social Inequality  
Fall of every year, Spring of every year, Summer of every year. 3(3-0) 
SA: SOC 330 
Effective Fall 2017 Effective Fall 2019

SOC 216  Sex and Gender

SOC 331  Political Sociology  
Fall of every year. Spring of every year. 3(3-0) 
Social power theories, dynamics, and structures. The economy and the polity. Power elites and democracy. Social bases of political behavior and participation. Sociopolitical movements. 
Effective Spring 2014 Effective Fall 2019

SOC 375  Urban Sociology  
Fall of every year. Spring of every year. 3(3-0) 
Social theories and research on urban development, organization, and change. Urban social life. Sociological aspects of urban planning and redevelopment. 
Effective Spring 2014 Effective Fall 2019
SOC 412  
**Animals, People and Nature**

*Animals, People, and Nature* Fall of every year. Spring of every year. 3(3-0) R: Not open to freshmen.

Sociological overview of the intersecting roles of animals, culture and nature in contemporary society. Sociological overview of the intersecting roles of animals, culture, and nature in contemporary society.

*Effective Spring 2014*  *Effective Fall 2019*

SOC 480  
**Advanced Research Methods in Sociology**

*Fall of every year. Spring of every year. 3(3-0) P: SOC 281 or approval of department RB: SOC 282 or concurrently R: Open to sophomores or juniors or seniors.*

Advanced training in methodologies commonly used in specific sub-fields of sociology. Advanced training and hands-on practice in methodologies commonly used in specific sub-fields of sociology.

*Effective Fall 2017*  *Effective Fall 2019*

**COLLEGE OF VETERINARY MEDICINE**

VM 410  
**Veterinary Technology Clerkship in Anesthesiology**

Fall of every year. Spring of every year. Summer of every year. 3 credits. *P: VM 270 and VM 275 and VM 245 and VM 304 P: (VM 270 and VM 275 and VM 245 and VM 304) and completion of Tier I writing requirement RB: Completion of preclinical course work.*

Application of principles and techniques in anesthesiology.

*Effective Spring 2013*  *Effective Spring 2019*

VM 412  
**Veterinary Technology Clerkship in Companion Animal Medicine**

Fall of every year. Spring of every year. Summer of every year. 3 credits. *P: VM 270 and VM 275 and VM 245 and VM 304 P: (VM 270 and VM 275 and VM 245 and VM 304) and completion of Tier I writing requirement RB: Completion of pre-clinical course work.*

Application of principles and techniques in restraint, examination, nursing care, monitoring, and preventive medicine of companion animals.

*Effective Spring 2013*  *Effective Spring 2019*