Report of
THE UNIVERSITY COMMITTEE ON CURRICULUM

to the Faculty Senate

Actions by UCC

April 25, 2024

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.
3. To provide information to members of the faculty in each department about academic programs and courses in all colleges, departments, and schools of the University.

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

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

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

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

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

1One or more of the abbreviations that follow may be included in a course entry:
P: = Prerequisite monitored in SIS
C: = Corequisite
R: = Restriction
RB: = Recommended background
SA: = Semester Alias
MICHIGAN STATE UNIVERSITY
April 25, 2024

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

PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

1. Change the requirements for the Bachelor of Science degree in Food Science in the Department of Food Science and Human Nutrition.

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

(1) In the Food Business and Industry concentration, add the following courses in item (2):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HB 265</td>
<td>Hospitality Food Service Systems I</td>
<td>3</td>
</tr>
<tr>
<td>HB 347</td>
<td>Hospitality Supply Chain Process</td>
<td>3</td>
</tr>
<tr>
<td>HB 358</td>
<td>Hospitality Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>HB 365</td>
<td>Hospitality Foodservice Systems II</td>
<td>3</td>
</tr>
<tr>
<td>HB 409</td>
<td>Introduction to Wine</td>
<td>3</td>
</tr>
<tr>
<td>HB 411</td>
<td>Hospitality Beverages</td>
<td>3</td>
</tr>
</tbody>
</table>

(2) In the Food Technology concentration, delete the following courses in item (2):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HB 100</td>
<td>Introduction to Hospitality Business</td>
<td>2</td>
</tr>
<tr>
<td>HB 267</td>
<td>Management of Food and Beverage Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Add the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HB 100</td>
<td>Introduction to Hospitality Business</td>
<td>3</td>
</tr>
<tr>
<td>HB 347</td>
<td>Hospitality Supply Chain Process</td>
<td>3</td>
</tr>
<tr>
<td>HB 358</td>
<td>Hospitality Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>HB 365</td>
<td>Hospitality Foodservice Systems II</td>
<td>3</td>
</tr>
<tr>
<td>HB 411</td>
<td>Hospitality Beverages</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Fall 2024.

COLLEGE OF ARTS AND LETTERS

1. Change the requirements for the Bachelor of Arts degree in English in the Department of English. The Teacher Education Council (TEC) approved this request at its April 15, 2024 meeting.

The concentrations in the Bachelor of Arts degree in English 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 Arts Degree in English make the following changes:

(1) In item 3. a. (3), change the total credits from ‘3 or 4’ to ‘3’.
(2) In item 3. a. (3), change the credits of ‘ENG 413’ from ‘4’ to ‘3’.

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

If English 360, 450 or 460 is used to fulfill this requirement it may not be used to fulfill requirement 3. a. (2) below.

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

ENG 324 Readings in Epic 3

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

If English 368 is used to fulfill this requirement it may not be used to fulfill requirement 3. a. (2).

(6) Following item 3. a. (8) add the following note:

Note: No single course may count more than once toward the requirements above.

(7) Under the **Creative Writing Concentration** make the following changes:

(a) In item 1., delete the following note:

ENG 320D replaces the literary history requirement in item 3. a. (2) above.

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

ENG 226 Introduction to Creative Writing 3
ENG 227 Introduction to Playwriting 3

Delete the following note:

One of these courses may be used to satisfy the requirement referenced in item 3. a. (6) above, as well as the requirements for the creative writing concentration.

(c) Change the requirement of 4. to ‘One creative writing elective, drawn from the following, or an additional workshop above’.

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

ENG 226 Introduction to Creative Writing 3
ENG 227 Introduction to Playwriting 3

(e) In item 5., add the following courses:

ENG 483 Seminar in Literary Editing and Publishing 3
ENG 484E Creative Writing Capstone 3

(8) Under the **Popular Culture Studies Concentration** make the following changes:

(a) In item 2., delete the following note:

ENG 342 can be used to satisfy the requirement referenced in item 3. a. (6) above as well as this requirement.

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

ENG 314 Readings in North American Literatures 3
ENG 324 Readings in Epic 3
PART I – NEW PROGRAMS AND PROGRAM CHANGES

(c) In item 4., delete the following note:

Either capstone experience may satisfy requirement 3. a. (7) above.

Effective Spring 2025.

2. Change the requirements for the Disciplinary Teaching Minor in Arabic that is available for secondary teacher certification in the Department of Linguistics, Languages, and Cultures. The Teacher Education Council (TEC) approved this request at its April 15, 2024, meeting.

a. Under the heading Arabic make the following changes:

(1) Replace item 3. with the following:

All of the following courses (10 credits):

- LLT 307 Methods in Second and Foreign Language Teaching 3
- TE 334 Clinical Experiences in World Language Education I 3
- TE 435 Seminar in World Language Education I 3
- TE 503 Internship in Teaching Diverse Learners in Additional Endorsement Areas 1

(2) Change the total credits from ‘22’ to ‘27’.

Effective Fall 2024.

3. Change the requirements for the Disciplinary Teaching Minor in Chinese that is available for secondary teacher certification in the Department of Linguistics, Languages, and Cultures. The Teacher Education Council (TEC) approved this request at its April 15, 2024, meeting.

a. Under the heading Chinese make the following changes:

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

TE 409 Crafting Teaching Practice in the Secondary Teaching Minor 1

Add the following courses:

- TE 334 Clinical Experiences in World Language Education I 3
- TE 435 Seminar in World Language Education I 3

(2) Change the total credits from ‘26’ to ‘31’.

Effective Fall 2024.

4. Change the requirements for the Disciplinary Teaching Minor in German that is available for secondary teacher certification in the Department of Linguistics, Languages, and Cultures. The Teacher Education Council (TEC) approved this request at its April 15, 2024, meeting.

a. Under the heading German make the following changes:

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

TE 409 Crafting Teaching Practice in the Secondary Teaching Minor 1

Add the following courses:

- TE 334 Clinical Experiences in World Language Education I 3
- TE 435 Seminar in World Language Education I 3
(2) Change the total credits from ‘23’ to ‘28’.

Effective Fall 2024.

5. Change the requirements for the Disciplinary Teaching Minor in Japanese that is available for secondary teacher certification in the Department of Linguistics, Languages, and Cultures. The Teacher Education Council (TEC) approved this request at its April 15, 2024 meeting.

a. Under the heading Japanese, make the following changes:

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 409</td>
<td>Crafting Teaching Practice in the Secondary Teaching Minor</td>
<td>1</td>
</tr>
</tbody>
</table>

Add the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 334</td>
<td>Clinical Experiences in World Language Education I</td>
<td>3</td>
</tr>
<tr>
<td>TE 435</td>
<td>Seminar in World Language Education I</td>
<td>3</td>
</tr>
</tbody>
</table>

(2) Change the total credits from ‘24’ to ‘29’.

Effective Fall 2024.

6. Establish a Graduate Certificate in Second Language Studies in the Department of Linguistics, Languages and Cultures. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its March 18, 2024 meeting.

a. Background Information:

Given the stability of the Second Language Studies (SLS) Doctoral Program in the Department of Linguistics, Languages, and Cultures and its trans-disciplinarity, adding a certificate option is a natural progression. The certificate would be expected to increase enrollments in our classes, and it would serve as an appealing gateway to a full degree. We are allowing broad participation as experience in second language studies is a broad qualification often sought after by those looking to fill new language-education positions and those looking to fill industry positions in language learning and testing research and materials development and design. The certificate will be related to MSU’s Master of Arts in Foreign Language Teaching (MAFLT) Program’s Foreign Language Teaching Certificate (FLTC); however, that certificate is only available online and focuses on classroom-based teaching. The Second Language Studies certificate focuses on second language acquisition, practice, and research and is in-person only. The certificate will also be related in some ways to the English Language Learner Education Graduate Certificate in the College of Education; however, that certificate focuses on contexts related to K-12 English language learners and is open only to doctoral students in the College of Education.

Offering the certificate program at MSU is because MSU is well known worldwide for its programming and research in second language studies. The Second Language Studies faculty have been asked if a certificate is available by graduate students at MSU in the past, and by MSU-external scholars who ask if they can participate in the program in ways other than joining the SLS degree program. The certificate would allow them to participate.

b. Academic Programs Catalog Text:

The Graduate Certificate in Second Language Studies, administered by the Department of Linguistics, Languages and Cultures, is designed to provide working professionals in applied linguistics or a related field or current graduate students at Michigan State University with materials and methodologies for researching their own practices, their program’s practices, or external language-teaching programs’ practices in second, additional, or multilingual language-teaching methods. The foci of the program is on applied linguistics and second language acquisition, exploration of the cognitive and social mechanisms underpinning second, additional, and multilingual language development, and how identities and ideologies, and educational language policies, practices, and assessment, affect teaching and learning. The program aids in the
understanding of second language acquisition theory and places emphasis on including marginalized and underrepresented language learners and teachers in research on second, additional, and multilingual language learning and teaching.

Admission

Applicants must complete the Intent to Enroll form on the Second Language Studies Program’s Web site at https://sls.msu.edu/admissions/.

Requirements for the Graduate Certificate in Second Language Studies

Students must complete 9 credits from the courses below with a minimum grade of 3.0 minimum in each course for it to count toward the certificate.

1. The following course (3 credits):
   LLT 860 Second Language Acquisition 3

2. Complete two additional courses selected from the following courses (6 credits):
   LLT 807 Language Teaching Methods 3
   LLT 808 Assessment for Language Teaching and Research 3
   LLT 809 Teaching Second Language Reading and Writing 3
   LLT 821 Individual Differences in Second Language Acquisition 3
   LLT 822 Interlanguage Analysis 3
   LLT 823 Introduction to Corpus Linguistics in Second Language Studies 3
   LLT 841 Topics in Second/Foreign Language Learning and Teaching 3
   LLT 842 Teaching and Learning Vocabulary in Another Language 3
   LLT 856 Language Identity and Ideology in Multilingual Settings 3
   LLT 861 Advanced Topics in Second Language Acquisition 3
   LLT 862 Advanced Research in Second Language Acquisition 3
   LLT 864 Second Language Psycholinguistics 3
   LLT 870 Instructed Second Language Acquisition 3
   LLT 872 Research Methods for Language Teaching and Foreign/Second Language Learning 3
   LLT 873 Quantitative Research in Second Language Studies 3
   LLT 874 Qualitative Research in Second Language Studies 3

3. Demonstrate working knowledge on second language studies research methods and skills by turning in a paper from any of the courses taken toward the certificate to the Second Language Program Director during the final-exam week of the last semester in the certificate program. The Director will provide feedback to the student on the paper by the time course grades are due that semester, with the expectation that the student will use the feedback to revise and then send the paper to an appropriate venue for potential publication.

4. Complete an exit survey during the final-exam week of the last semester in the certificate program.

Effective Fall 2024.

7. Change the requirements for the Doctor of Philosophy degree in Second Language Studies in the Department of Linguistics, Languages and Cultures. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

   a. Under the heading Admission delete item 1. :

      1. The results of the Graduate Record Examination General Test.

Effective Fall 2024.
8. Change the name of the Master of Arts degree in Teaching English to Speakers of Other Languages to Teaching English to Speakers of Other Languages and Applied Linguistics in the Department of Linguistics, Languages, and Cultures.

No new students are to be admitted to the Master of Arts degree in Teaching English to Speakers of Other Languages effective Fall 2024. No students are to be readmitted to the Teaching English to Speakers of Other Languages effective Fall 2024. Effective Fall 2026, coding for the Master of Arts degree in Teaching English to Speakers of Other Languages will be discontinued and the program will no longer be available in the Department of Linguistics, Languages, and Cultures. Students admitted to the master’s degree prior to Fall 2024 will be awarded a Master of Arts Degree in Teaching English to Speakers of Other Languages in the Department of Linguistics, Languages, and Cultures. Students admitted to the master’s degree Fall 2024 and forward will be awarded a Master of Arts Degree in Teaching English to Speakers of Other Languages and Applied Linguistics in the Department of Linguistics, Languages, and Cultures.

9. Change the requirements for the Master of Arts degree in Teaching English to Speakers of Other Languages and Applied Linguistics in the Department of Linguistics, Languages, and Cultures. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

a. Under the heading Requirements for the Master of Arts Degree in Teaching English to Speakers of Other Languages and Applied Linguistics make the following changes:

   1. Under the heading Admission make the following changes:

   a. In paragraph one, delete item 3.:

      have the results of the Graduate Record Examination General Test forwarded to the university if the applicant is a native speaker of English.

   b. In paragraph one, add the following new item 3.:

      Take one of the tests of English language proficiency described below if the applicant’s first language is not English.

   c. Delete paragraph three and replace with the following:

      In addition, an international applicant whose first language is not English is required to have fulfilled the university's English language proficiency requirement. For international applicants and applicants whose first language is not English, submit English language test scores, with the test being an approved one from the Michigan State University Graduate School's list of English language tests for international students.

      Students are generally admitted for fall semester only. Spring semester admissions decisions are made on a case-by-case basis.

Effective Fall 2024.

10. Change the requirements for the Graduate Certificate in Nonprofit Leadership, Global Cultures, and Social Enterprise in the Department of Religious Studies. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

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

   To be considered for admission to the Graduate Certificate in Nonprofit Leadership, Global Cultures, and Social Enterprise students must:

   1. have a four-year bachelor's degree from a regionally or nationally accredited institution, or be a current advanced undergraduate student at a recognized institution.

   2. have a cumulative undergraduate grade-point average of at least 3.0 in the last two years of undergraduate study. This requirement is waived for students currently pursuing a master's or doctoral degree program at MSU.
3. submit an admissions portfolio consisting of a statement of purpose/letter of intent, a resume or curriculum vitae, three letters of recommendation, copies of official university or college transcripts.

4. have an ACM minimum TOEFL score of 90 on the non-native language proficiency test if the student is an international applicant.

Effective Spring 2025.

11. Establish a **Minor in French Education** in the Department of Romance and Classical Studies. The Teacher Education Council (TEC) approved this request at its March 18, 2024 meeting. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its April 11, 2024 meeting.

   a. **Background Information:**

      The forward-looking mission of the French and Francophone Studies Program is sensitive to the vital role that languages and cultural awareness play in preparing students to be future leaders in their fields and socially and globally responsible citizens. The French and Francophone Studies Program's mission is to help students advance their knowledge of the French language, and the cultural heritages and the literary traditions of France and the Francophone world and to lead students to develop complex reasoning skills, synthesize, integrate, and apply disciplinary knowledge to understand broader social, cross-cultural and interdisciplinary issues. The MSU French Education program connects the learning of the French language and cultures to the training necessary to become a passionate and competent French teacher. Its emphasis on interdisciplinary, cross-cultural, and immersion education allows students to creatively articulate meaningful links that they can share with their future students.

      The College of Education is revising all education minors following a change at the State level which merged “elementary” and “secondary” education as “PK-12”. As a result, we are eliminating our previous minor and creating a new French Education minor. The program combines the requirements for the French minor with the new PK-12 education courses required for a minor.

   b. **Academic Programs Catalog Text:**

      The Minor in French Education connects the learning of the French language and cultures to the training necessary to become a passionate and competent French teacher. Its emphasis on interdisciplinary, cross-cultural, and immersion education allows students to creatively articulate meaningful links that they can share with their future students.

      This minor is available as an elective to students who are enrolled in bachelor’s degree programs at Michigan State University other than the Bachelor of Arts Degree in French Education. 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 the Department of Romance and Classical Studies and have their program of study approved in advance and in writing.

**Requirements for the Minor in French Education**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRN 310</td>
<td>Stepping into the 20th Century and Beyond</td>
<td>3</td>
</tr>
<tr>
<td>FRN 320</td>
<td>Exploring Diversity and Minorities in the Francosphere</td>
<td>3</td>
</tr>
<tr>
<td>FRN 330</td>
<td>Progressing in French Pronunciation</td>
<td>3</td>
</tr>
<tr>
<td>FRN 340</td>
<td>Connecting with the Literatures of the Francosphere (W)</td>
<td>3</td>
</tr>
<tr>
<td>FRN 350</td>
<td>Connecting with the Cultures of the Francosphere (W)</td>
<td>3</td>
</tr>
<tr>
<td>Two electives at the 400-level approved by the student’s academic advisor</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
PART I – NEW PROGRAMS AND PROGRAM CHANGES

2. All of the following courses (7 credits):
   TE 334 Clinical Experiences in World Language Education I  3
   TE 435 Seminar in World Language Education I   3
   TE 503 Internship in Teaching Diverse Learners in Additional Endorsement Areas    1

   Effective Fall 2024.

12. Establish a Minor in Spanish Education in the Department of Romance and Classical Studies. The Teacher Education Council (TEC) approved this request at its March 18, 2024 meeting. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its April 11, 2024 meeting.

   a. Background Information:

   The Spanish language program fosters the study of the human experience as expressed in the language, dialects, literatures, and cultures of Spain, Mexico, Central and South America, and the Caribbean. Students have the opportunity to take courses across the curriculum or focus on a specific area of interest such as the Spanish language, the Literature of Spain, the Literature of Latin America and the Caribbean and Spanish Linguistics. The MSU Spanish Education program connects the learning of the Spanish language and cultures to the training necessary to become a passionate and competent Spanish teacher. Its emphasis on interdisciplinary, cross-cultural, and immersion education allows students to creatively articulate meaningful links that they can share with their future students.

   The College of Education is revising all education minors following a change at the State level which merged “elementary” and “secondary” education as “PK-12”. As a consequence, we are eliminating our previous minor and creating a new Spanish Education minor. The program combines the requirements for the Spanish minor with the new PK-12 education courses required for a minor.

   b. Academic Programs Catalog Text:

   The Minor in Spanish Education program connects the learning of the Spanish language and cultures to the training necessary to become a passionate and competent Spanish teacher. Its emphasis on interdisciplinary, cross-cultural, and immersion education allows students to creatively articulate meaningful links that they can share with their future students.

   This minor is available as an elective to students who are enrolled in bachelor's degree programs at Michigan State University other than the Bachelor of Arts Degree in Spanish Education. 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 the Department of Romance and Classical Studies and have their program of study approved in advance and in writing.

   Requirements for the Minor in Spanish Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPN 310</td>
<td>Basic Spanish Grammar</td>
<td>3</td>
</tr>
<tr>
<td>SPN 320</td>
<td>Cultural Readings and Composition (W)</td>
<td>3</td>
</tr>
<tr>
<td>SPN 330</td>
<td>Phonetics and Pronunciation</td>
<td>3</td>
</tr>
<tr>
<td>SPN 342</td>
<td>Media and Conversation</td>
<td>3</td>
</tr>
<tr>
<td>SPN 350</td>
<td>Introduction to Reading Hispanic Literature (W)</td>
<td>3</td>
</tr>
<tr>
<td>SPN 350</td>
<td>Electives at the 400-level as approved by the student's academic advisor</td>
<td>6</td>
</tr>
</tbody>
</table>

   CREDITS

   21
2. All of the following courses (7 credits):
   - TE 334 Clinical Experiences in World Language Education I  3
   - TE 435 Seminar in World Language Education I   3
   - TE 503 Internship in Teaching Diverse Learners in Additional Endorsement Areas  1

   Effective Fall 2024.

13. Establish an **Undergraduate Certificate** (Type 2) in Translation in the Department of Romance and Classical Studies. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its March 7, 2024 meeting.

   a. **Background Information:**

   Language study goes far beyond traditional philological models and modern-day students seek the added value that applied language practice offers to their fields of study and future professional goals. More than ever, a redesign of language curricula integrates topics such as language for special purposes and experiential learning opportunities. Translation is arguably the most sought-after skill due to its ubiquitous utility in the professional sphere. More than a word-for-word transfer of language, effective translation is a deliberate process that requires intercultural understanding and, typically, technical and lexical familiarity of a language set. This undergraduate certificate responds to the requests and needs of our students as they acquire the tools to thrive in a global community.

   The number of undergraduate certificates in translation offered in Michigan is extremely limited; therefore, the opportunity exists to provide this training to a large population of students and residents of the state. The certificate codifies the skills learned and helps students to integrate them into the workplace. MSU’s brand combined with its strong tradition of language education and research, including the MSU Translation Center, provides a solid foundation to offer this certificate. This curricular addition enhances the student’s professional profile and their potential to reach future career goals.

   b. **Academic Programs Catalog Text:**

   The Undergraduate Certificate in Translation, which is administered by the Department of Romance and Classical Studies, provides specialized knowledge of translation through classroom instruction and experiential opportunities.

   The undergraduate certificate is available as an elective to students who are enrolled in bachelor’s degree programs at Michigan State University. With approval of the department and college that administers the student’s degree program, the courses that are used to satisfy the undergraduate certificate may also be used to satisfy the requirements for the bachelor’s degree.

   Students who plan to complete the requirements of the undergraduate certificate should consult the undergraduate advisor in the Department of Romance and Classical Studies.

   **Admission**

   Students must meet the course prerequisites. Working professionals will need to demonstrate appropriate language proficiency or previous language education experience through an interview to be considered for admission.

   **Requirements for the Undergraduate Certificate in Translation**

   Students must complete 10 credits from the following:

   1. The following foundational course (3 credits):
      - ROM 240 Fundamentals in Translation Theory and Practice  3

   2. Complete two courses from one of the following tracks (6 credits);
      a. **French**
         - FRN 420 French for Professional Uses  3
         - A 400-level elective based on the student’s interest  3
PART I – NEW PROGRAMS AND PROGRAM CHANGES

b. **Spanish**
   
   SPN 452  Topics in Spanish Language I  3  
   
   A 400-level elective based on the student's interest  3  
   
3. Complete the one of the following experiential learning experiences (1 credit):
   
   1. UGS 292 Experiential Learning in Undergraduate Studies  1  
   2. An internship in the MSU Translation Center or similar internship experience (abroad, away, community, or virtual and the preparation of a portfolio.

Effective Fall 2024.

14. Change the requirements for the **Master of Arts** degree in **Rhetoric and Writing** in the Department of Writing, Rhetoric and Cultures. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

   a. Under the heading **Requirements for the Master of Arts Degree in Rhetoric and Writing** make the following changes:

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

   All of the following courses (9 credits):

   - WRA 801  Introduction to Rhetoric and Writing  3  
   - WRA 810  Writing, Composing, Designing, Making  3  
   - WRA 880  Theories of Rhetoric and Writing  3  

   (2) Under **Custom Emphasis** add the following courses:

   - WRA 828  Queer Rhetorics  3  
   - WRA 842  Foundations in Experience Architecture  3  

Effective Fall 2024.

15. Change the requirements for the **Doctor of Philosophy** degree in **Rhetoric and Writing** in the Department of Writing, Rhetoric and Cultures. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

   a. Under the heading **Requirements for the Doctor of Philosophy Degree in Rhetoric and Writing** replace the entire entry with the following:

   The student must:

   1. Complete a minimum of 27 credits of graduate course work. No more than 6 credits of 400-level course work will count toward the degree.
   2. All of the following core courses (12 credits):

   - WRA 801  Introduction to Rhetoric and Writing  3  
   - WRA 810  Writing, Composing, Designing, Making  3  
   - WRA 870  Research Methodologies in Rhetoric and Writing  3  
   - WRA 880  Theories of Rhetoric and Writing  3  

   For students who already hold an Master of Arts in Rhetoric and Writing from our program, alternative arrangements will be made with regards to their core course requirements. Alternatives can include independent studies or fulfilling the requirement by taking other courses offered in the program with the approval of the Director.

3. Concentrations:

   a. Complete at least three courses, a minimum of 9 credits, in one of the following concentrations:

   Cultures, Identities, and Communities  
   Leadership and Administration  
   Writing Pedagogy and Learning
Technical and Professional Communication

A list of courses eligible for each concentration is available from the program director. Courses used to fulfill core requirements may not be used to satisfy concentration requirements. Other concentrations may be approved the student’s guidance committee.

4. Pass a written comprehensive examination on the core courses and the area of concentration.
5. Pass a pre-dissertation examination consisting of an oral examination based on a written prospectus and a preliminary bibliography for the dissertation project.

Effective Fall 2024.

ELI BROAD COLLEGE OF BUSINESS

1. Establish a **Graduate Certificate** in **Accounting Foundations** in the Department of Accounting and Information Systems. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its March 18, 2024 meeting.

   a. **Background Information:**

   Nationwide, accounting programs are facing declining enrollments. The same trend is apparent here at MSU in both the B.A. in Accounting program and in the on-premises M.S. in Accounting program that only takes students with an undergraduate degree in accounting or finance graduates with relevant accounting courses to apply. To offset this continuing loss of enrollment, we need to serve a broader population of students. Market research has indicated that there is interest in accounting from people from other backgrounds who want to develop accounting knowledge, skills and understanding to enhance their careers, as well as people seeking to make a career change. There are two specific reasons that this certificate is needed. First, this certificate will provide an opportunity for people from other backgrounds to develop basic accounting knowledge, skills and understanding to enhance their careers. Second, this certificate will provide the prerequisite accounting knowledge to prepare students for the M.S. in Accounting or M.S. in Accounting and Data Analytics program or continue taking other online graduate certificates in accounting offered. The university permits up to nine credits to transfer into graduate programs, and the Accounting Foundations graduate certificate can serve as a feeder to these two graduate programs.

   The graduate certificate leverages the strengths of our accounting faculty and is consistent with the strategic initiatives of the college to enhance careers and lifelong learning through graduate programs. This online graduate certificate program will allow both working professionals and full-time students 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 to for the Certified Public Accountant (CPA) licensure. 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 Foundations is designed to prepare students with basic accounting knowledge and provide essential tools and skills to understand accounting principles. The certificate is available online only.

   **Admission**

   Students:

   1. must have a bachelor's degree from an accredited institution.
   2. have a recommended minimum cumulative undergraduate grade-point average of 3.0.
Requirements for the Graduate Certificate in Accounting Foundations

1. Both of the following courses (6 credits):
   - ACC 870 Principles of Financial and Managerial Accounting 3
   - ACC 872 Financial Reporting and Data Analysis 3

2. Complete one of the following courses (3 credits):
   - ACC 871 Accounting Database Systems 3
   - ACC 873 Principles of Federal Income Tax Accounting 3
   - ACC 874 Performance Measurement and Control Systems 3

The program director can guide students regarding which course to choose depending upon the individual’s interests and career goals.

Students are expected to maintain a minimum cumulative grade-point average of 3.0 in all courses in the certificate and a minimum 2.0 grade in each course for the course to count towards the certificate program.

Effective Fall 2024.

2. Delete the curriculum and degree requirements for the Master of Science degree in Foodservice Business Management (Michael L. Minor) in the School of Hospitality Business. The University Committee on Graduate Education (UCGS) provided consultative commentary to the Provost after considering this request. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Graduate Studies.

No new students are to be admitted to the program effective Fall 2020. No students are to be readmitted to the program effective Fall 2020. Effective Summer 2022, coding for the program will be discontinued and the program will no longer be available in the School of Hospitality Business. Students who have not met the requirements for the Master of Science Degree in Foodservice Business Management through the School of Hospitality Business prior to Summer 2022 will have to change their major.

Note: This program has been in moratorium since Fall 2020.

COLLEGE OF COMMUNICATION ARTS AND SCIENCES

1. Change the requirements for the Bachelor of Science degree in Advertising Management in the Department of Advertising and Public Relations.

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

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

          (a) Change the total credits from ‘31’ to ‘36’.

          (b) Delete the following courses:

          | Course Code | Course Name                                      | Credits |
          |-------------|--------------------------------------------------|---------|
          | ADV 225     | Basic Skills for Advertising Careers            | 3       |
          | CAS 110     | Creative Thinking                                | 3       |
          | PR 225      | Writing for Public Relations                     | 3       |

          Add the following courses:

          | Course Code | Course Name                                      | Credits |
          |-------------|--------------------------------------------------|---------|
          | ADV 200     | The World of Advertising                          | 2       |
          | ADV 432     | Advertising Innovations                           | 3       |
          | ADV 482     | Project Management for Advertising and Public Relations | 3       |
          | PR 310      | Diversity, Equity, and Inclusion in Public Relations and Advertising | 3       |

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

          (a) Delete the following course:
PART I – NEW PROGRAMS AND PROGRAM CHANGES

Add the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADV 432</td>
<td>Digital Media Planning and Buying</td>
<td>3</td>
</tr>
</tbody>
</table>

ACC 201 Principles of Financial Accounting 3
or
ACC 230 Survey of Accounting Concepts 3

ADV 401 Neuromarketing and Consumer Decisions 3
CAS 110 Creative Thinking 3
CAS 214 Social Media and Start-up 3
CSE 102 Algorithmic Thinking and Programming 3
EC 201 Introduction to Microeconomics 3
EC 202 Introduction to Macroeconomics 3
FI 320 Introduction to Finance 3
GBL 323 Introduction to Business Law 3
MKT 327 Introduction to Marketing 3
PKG 101 Principles of Packaging 3
PSY 101 Introductory Psychology 4
SCM 304 Survey of Supply Chain Management 3

(3) Delete item 3. c.

Effective Fall 2025.

2. Change the requirements for the Bachelor of Arts degree in Games and Interactive Media in the Department of Media and Information.

a. Under the heading Requirements for the Bachelor of Arts Degree in Games and Interactive Media, make the following changes:

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

The University’s Tier II writing requirement for the Games and Interactive Media major is met by completing one of the following courses: Media and Information 402, 430, 447, 477, 482, 486, 495, or 498. Those courses are referenced in item 3. below.

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

CAS 116 Media Sketching and Graphics 3

Add the following course:

MI 103 Practical Computing for Interactive Media 3

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

MI 111 Game Literacy 3
MI 320 Reasoning with Data 3

(4) In item 3. c. under Game Design, delete the following course:

MI 344 Sound Design for Cinema, Television and Games 3

Add the following courses:

DS 344 Sound Design for Storytelling 3
MI 495 Game and Interactive Media Projects (W) 3

(5) In item 3. c. under Game Graphics and Animation, add the following course:

MI 495 Game and Interactive Media Projects (W) 3
PART I – NEW PROGRAMS AND PROGRAM CHANGES

(6) In item 3. c. under Game Development, delete the following course:

MI 484 Building Innovative Interfaces (W)    3

Add the following course:

MI 495 Game and Interactive Media Projects (W)   3

Effective Spring 2025.

3. Change the requirements for the Bachelor of Arts degree in Information Science in the Department of Media and Information.

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

(1) In item c. under Human-Centered Technologies add the following course:

MI 484 Human Robot Interaction (W)    3

(2) In item c. under Information and Society add the following course:

MI 484 Human Robot Interaction (W)    3

(3) Replace item d. with the following:

Media and Information (MI) Electives
Additional credits in department courses can be taken as electives. Special topics (MI 491) and internships (MI 493) are encouraged for experiential learning opportunities. Students interested in pursuing a minor should contact the Academic and Students Affairs Office in the College of Communication Arts and Sciences.

Effective Spring 2025.

COLLEGE OF EDUCATION

1. Change the name of the Minor in Educational Studies to Education and Society in the College of Education.

No new students are to be admitted to the Minor in Educational Studies effective Fall 2024. No students are to be readmitted to the Minor in Educational Studies effective Fall 2024. Effective Fall 2029, coding for the Minor in Educational Studies will be discontinued and the program will no longer be available in the College of Education. Students admitted to the minor prior to Fall 2024 will be awarded a Minor in Educational Studies in the College of Education. Students admitted to the minor Fall 2024 and forward will be awarded a Minor in Education and Society in the College of Education.

2. Change the requirements for the Minor in Education and Society in the College of Education.

a. Under the heading Requirements for the Minor in Education and Society make the following changes:

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

CEP 370 Educating Students with Special Needs    3
CEP 371 Fundamentals of Conflict and Conflict Resolution in Educational Settings    3
EAD 362 Student Culture and Higher Education    3
EAD 363 Diversity and Higher Education    3
Add the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEP 240</td>
<td>Diverse Learners in Multicultural Perspective</td>
<td>3</td>
</tr>
<tr>
<td>TE 101</td>
<td>Social Foundations of Justice and Equity in Education</td>
<td>3</td>
</tr>
<tr>
<td>TE 102</td>
<td>Pedagogy and Politics of Justice and Equity in Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Fall 2024.

3. Establish a **Master of Arts** degree in **Clinical Mental Health Counseling** in the Department of Counseling, Educational Psychology, and Special Education. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its February 19, 2024 meeting.

a. **Background Information:**

The mission of the Clinical Mental Health Counseling program is to prepare future clinical mental health counselors at the master’s level to promote the effective delivery of mental health counseling services to families and individuals with emotional and/or substance abuse disorders. Through course work and clinical training, graduates will gain mastery on the skills, knowledge, and attitudes in mental health services provision to clients across a variety of clinical and community settings. The program is designed specifically with the standards of the national educational accreditation body, CACREP in mind, with the intention that the program will collect the necessary data to submit for formal accreditation. The curriculum is also aligned with the state and closely aligned with national counseling licensure requirements (note master’s level counseling licensure is governed at the state level), thus, the program is designed to maximize the marketability of graduates. This program will be a 60-credit program in which 11 courses will overlap with our existing master’s degree in rehabilitation counseling while 4 core clinical mental health counseling courses are being developed. This allows efficiency in teaching courses and expanding the richness of students in different disciplines in the counseling fields.

The creation of the Master of Arts degree in Clinical Mental Health Counseling program under the careful survey of the local as well as national demand for professional counselors, will address the mental health related issues and wellness of people with disabilities and without disabilities. As a profession and as educators training rehabilitation counselors to work with people with disabilities, there is the need to address/expand the skillset of counselors not only for working with people with disabilities on employment, independent living and community integration, which is what rehabilitation counseling’s expertise is, but also the need to expand, in order to encompass the mental health aspect of the people when providing services.

Within the College of Education, the Office of Rehabilitation and Disability Studies is the only one that provides a training program that produces master’s level practitioners in counseling. The existent Master of Arts degree in Rehabilitation Counseling and doctoral program in Rehabilitation Counselor Education have undergone the accreditation process of the Council for Accreditation of Counseling and Related Educational Programs (CACREP). CACREP is one of the few accreditation bodies for counseling programs in the United States. CACREP covers eight specialty areas (see 2016 standards at https://www.cacrep.org/for-programs/2016-cacrep-standards/), which constitutes master’s level, practitioner-oriented programs. Since these two programs are ranked at the top in the country, one under the specialty area in Rehabilitation Counseling, and the other the doctoral program in Rehabilitation Counselor Education, the department is familiar with the accreditation process and structure to create another counseling program that produces practicing counselors to meet the demand of the community and society. This clinical mental health counseling program will align with the CACREP’s clinical mental health counseling specialty area, which is also aligned with and is recognized by the Michigan licensure requirement (https://ars.apps.lara.state.mi.us/.AdminCode/DownloadAdminCodeFile?FileName=R%20338.1751%20to%20R%20338.1781.pdf&ReturnHTML=True).

The department has successfully hired a tenure-track faculty member for the clinical mental health counseling program, as well as clinical faculty who will assist with the setup of the clinical coordination for this program. While there are existent Clinical Mental Health Counseling programs in colleges in Michigan (e.g., Wayne State, Eastern, Western, Central and Oakland), a careful analysis of their programs shows that two of the programs take a generalist approach while the other three offer specialized courses and foci. Our program also takes the latter approach where we are building in current and future courses and electives to capitalize on the relevant expertise of our faculty in trauma-informed counseling, family, technology, behavior health/holistic health and
wellness and transition that align with the strategic plans of the College of Education and Michigan State University, as well as tap into existing strengths and resources of other Colleges and Departments (College of Human Medicine (Public Health), College of Nursing, and College of Social Sciences (Psychology, Social Work, Human Development and Family Studies).

b. Academic Programs Catalog Text:

The Master of Arts degree in Clinical Mental Health Counseling prepares future clinical mental health counselors to promote the effective delivery of mental health counseling services to families and individuals with emotional and/or substance abuse disorders. Through course work and clinical training, graduates will gain mastery in the skills, knowledge, and attitudes required for mental health services provision to clients across a variety of clinical and community settings.

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

Admission

To be admitted into the Master of Arts Degree in Clinical Mental Health Counseling applicants must:

1. submit both the university application forms and applicable application fee. Individuals are admitted to the program once per year with enrollment starting in the Fall semester. The deadline to submit applications for admission is February 15th.

Consideration is given to the applicant's previous academic and professional experience. There should be a pattern of experience that supports the applicant’s expressed desire to pursue advanced graduate studies in clinical mental health counseling. Appropriate evidence of such experience should be reflected in the applicant's letters of recommendation. The following are factors significant in determining admission to the program:

1. A bachelor's degree in an appropriate field from a recognized educational institution, with a grade point average of 3.0 (B) or better in the last two years of undergraduate study.
2. A written statement of academic goals and career objectives (1 to 2 pages single spaced) that describes the applicant's professional goals as they relate to the Master of Arts degree program in Clinical Mental Health Counseling.
3. Scores from the Graduate Record Examination General Test if the applicant's grade point average is less than 3.0.
4. Three letters of recommendation, with at least two from professors or employers regarding the applicant's academic capability and/or professional and personal qualifications.

The applicant is required to submit a departmental application form, as well as the university application form. Upon request for admission to the program, the departmental application form is mailed to the applicant with the university application form.

Requirements for the Master of Arts Degree in Clinical Mental Health Counseling

The program is available only under Plan B (without thesis). The student must complete a total of 60 credits distributed as follows:

<table>
<thead>
<tr>
<th>CREDENTIAL</th>
<th>Course Code</th>
<th>Course Title</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Counseling Core</td>
<td>All of the following courses (15 credits):</td>
<td></td>
</tr>
<tr>
<td>CEP</td>
<td>861</td>
<td>Counseling Theories</td>
<td>3</td>
</tr>
<tr>
<td>CEP</td>
<td>862</td>
<td>Individual Counseling and Helping Relationships</td>
<td>3</td>
</tr>
<tr>
<td>CEP</td>
<td>864</td>
<td>Career Development</td>
<td>3</td>
</tr>
<tr>
<td>CEP</td>
<td>874</td>
<td>Counseling Ethics</td>
<td>3</td>
</tr>
<tr>
<td>CEP</td>
<td>878</td>
<td>Counseling and Group Work</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Clinical Mental Health Counseling Core</td>
<td>All of the following courses (12 credits):</td>
<td></td>
</tr>
<tr>
<td>CEP</td>
<td>839</td>
<td>Foundations of Clinical Mental Health Counseling</td>
<td>3</td>
</tr>
<tr>
<td>CEP</td>
<td>849</td>
<td>Diagnosis and Psychopathology</td>
<td>3</td>
</tr>
<tr>
<td>CEP</td>
<td>859</td>
<td>Crisis and Trauma Counseling</td>
<td>3</td>
</tr>
<tr>
<td>CEP</td>
<td>875</td>
<td>Addiction Counseling</td>
<td>3</td>
</tr>
</tbody>
</table>
3. **Research and Evaluation.**
   All of the following courses (6 credits):
   - CEP 822 Approaches to Educational Research   3
   - CEP 877 Assessment in Counseling  3

4. **Foundations.** All of the following courses (6 credits):
   - CEP 891C Special Topics in Rehabilitation Counseling
     (Section: Development Across the Lifespan)   3
   - CEP 872 Social and Cultural Diversity in Disability  3

5. **Practicum and Internship.** All of the following courses (15 credits):
   - CEP 894A Practicum in Counseling   3
   - CEP 893A Internship in Counseling  12

6. **Electives** (6 credits):
   Complete 6 credits of relevant master’s level courses approved by program director and/or advisor.

7. Completion of a final evaluation.

Effective Fall 2024.

4. Change the requirements for the **Minor in Coaching** in the Department of Kinesiology.
   a. Under the heading **Requirements for the Minor in Coaching** make the following changes:
      (1) In item 1., change delete the following course:
          KIN 345 Sport and Exercise Psychology (W)   3
          Add the following course:
          KIN 345 Exercise Psychology (W)   3
      (2) In item 2., delete the following courses:
          ANTR 350 Human Gross Anatomy for Pre-Health Professionals   3
          KIN 216 Applied Human Anatomy   3
          Add the following courses:
          ANTR 350 Human Gross Anatomy for Pre-Health Professionals   4
          KIN 216 Principles of Human Anatomy   3

Effective Spring 2025.

5. Change the requirements for the **Bachelor of Science** degree in **Kinesiology** in the Department of Kinesiology.
   a. Under the heading **Requirements for the Bachelor of Science Degree in Kinesiology** make the following changes:
      (1) In item 1., replace paragraph three with the following:
          The University’s Tier II writing requirement for the Kinesiology major is met by completing Kinesiology 345 referenced in item 2. below.
      (2) In item 2. b. delete the following course:
          KIN 216 Applied Human Anatomy   3
          Add the following course:
          KIN 216 Principles of Human Anatomy   3
      (3) In item 2. c. delete the following course:
Part I – New Programs and Program Changes

KIN 345  Sport and Exercise Psychology (W)  3

Add the following course:

KIN 345  Exercise Psychology (W)  3

Effective Spring 2025.

6. Change the requirements for the Bachelor of Arts degree in Elementary Education in the Department of Teacher Education. The Teacher Education Council (TEC) approved this request at its April 15, 2023 meeting.

The concentrations referenced in the Bachelor of Arts degree in Elementary Education 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 Arts Degree in Elementary Education replace item 2. d. with the following:

**English as a Second Language** (25 to 29 credits):
Completion of this requirement satisfies the course requirements for the additional endorsement in English as a Second Language. ESL can be waived by completion of Birth-Kindergarten endorsement for Prekindergarten through Grade 3 students.

(1) All of the following courses (16 credits):
   LLT 307  Methods of Second and Foreign Language Teaching  3
   LLT 346  Pedagogical English Grammar for English Teachers  3
   TE 101  Social Foundations of Justice and Equity in Education  3
   TE 341  Teaching and Learning of (Bi)Multilingual Learners  3
   TE 342  Teaching Methods for (Bi)Multilingual Learners  3
   TE 503  Internship in Teaching Diverse Learners in Additional Endorsement Areas  1

(2) One of the following courses (3 credits):
   LLT 361  Second and Foreign Language Learning  3
   LLT 362  Child Second Language Learning  3

(3) One of the following courses (3 credits):
   TE 301A  Children’s Literacy Development PK-3 (W)  3
   TE 301B  Children’s Literacy Development 3-6 (W)  3

(4) Complete either (a) or (b) and (c) (3 or 6 or 7 credits):
   (a) LLT 322  English as a Second Language Perspectives in Context  3
   (b) LIN 200  Introduction to Language  3
   or LIN 401  Introduction to Linguistics  4
   and ANP 420  Language and Culture  3

(5) Proof of proficiency in an additional language equivalent to two semesters of study.

Effective Fall 2024.
7. Change the requirements for the **Teacher Certification Program** in the Department of Teacher Education. The Teacher Education Council (TEC) approved this request at its April 15, 2024 meeting.

a. Under the heading **REQUIREMENTS FOR TEACHER CERTIFICATION** make the following changes:

   (1) Add the following section above the **Course Requirements for Elementary Teacher Certification**:

   **Course Requirements for Birth to Kindergarten Certification**
   
   a. All of the following courses (53 credits):
   
   - CEP 240 Introduction to Exceptional Learners 3
   - CEP 351 Special Education Law and Policies 3
   - HDFS 211 Child Growth and Development 3
   - HDFS 320 Interaction with Children in Groups 3
   - HDFS 320L Interaction with Children – Laboratory 1
   - HDFS 321 Curriculum for Children (W) 3
   - HDFS 321L Curriculum for Children – Laboratory 1
   - HDFS 322 Infant Development and Program Planning 3
   - HDFS 322L Interaction and Curriculum for Infants and Toddlers - Laboratory 2
   - HDFS 421 Assessment of the Young Child 3
   - HDFS 424 Student Teaching in an Early Childhood Program 6
   - HDFS 449 Special Needs Children and Their Families 3
   - HDFS 449L Children with Special Needs and Their Families Laboratory 1
   - HDFS 473 Administration of Early Childhood Programs 3
   - TE 301A Children’s Literacy Development PK-3 (W) 3
   - TE 330 Science Curriculum for Young Learners (PK-3) 3
   - TE 341 Teaching and Learning of (Bi)Multilingual Learners 3
   - TE 405A Teaching Literacy to Diverse Learners (PK-3) 3
   - TE 406A Teaching Mathematics to Diverse Learners I (PK-3) 3

   (2) In the section **Course Requirements for Elementary Teacher Certification** replace the **GPA Standards** statement with the following:

   All elementary teacher candidates must pass all TE courses as well as CEP 240 with a grade of 2.0 or above. All elementary candidates must have a grade point average of 2.0 or above.

   (3) In the section **Course Requirements for Elementary Teacher Certification** replace item d. with the following:

   **English as a Second Language** (25 to 29 credits):

   Completion of this requirement satisfies the course requirements for the additional endorsement in English as a Second Language. ESL can be waived by completion of Birth-Kindergarten endorsement for Prekindergarten through Grade 3 students.

   (1) All of the following courses (16 credits):
   
   - LLT 307 Methods of Second and Foreign Language Teaching 3
   - LLT 346 Pedagogical English Grammar for English Teachers 3
   - TE 101 Social Foundations of Justice and Equity in Education 3
   - TE 341 Teaching and Learning of (Bi)Multilingual Learners 3
   - TE 342 Teaching Methods for (Bi)Multilingual Learners 3
   - TE 503 Internship in Teaching Diverse Learners in Additional Endorsement Areas 1

   (2) One of the following courses (3 credits):
   
   - LLT 361 Second and Foreign Language Learning 3
   - LLT 362 Child Second Language Learning 3
(3) One of the following courses (3 credits):
TE  301A  Children’s Literacy Development PK-3 (W)   3
TE  301B  Children’s Literacy Development 3-6 (W)   3
TE  302  Literacy and Adolescent Learners in School and Community Contexts    3
(4) Complete either (a) or (b) and (c) (3 or 6 or 7 credits):
(a)  LLT  322  English as a Second Language Perspectives in Context   3
(b)  LIN  200  Introduction to Language    3
or
LIN  401  Introduction to Linguistics    4
and
(c)  ANP  420  Language and Culture    3
(5) Proof of proficiency in an additional language equivalent to two semesters of study.
(4) In the section **Course Requirements for Secondary Teacher Certification** replace the **GPA Standards** statement with the following:
All secondary teacher candidates must pass all TE courses as well as CEP 240 with a grade of 2.0 or above. All secondary candidates must have a grade point average of 2.0 or above.
(5) In the section **Course Requirements for Secondary Teacher Certification**, under item c. **Optional Teaching Endorsements**, remove the following:
Biology
Chemistry
Earth Science
Physics
(6) In the section **Course Requirements for PK-12 Teacher Certification** replace the **GPA Standards** statement with the following:
All secondary teacher candidates must pass all TE courses as well as CEP 240 with a grade of 2.0 or above. All secondary candidates must have a grade point average of 2.0 or above.
(7) In the section **Course Requirements for PK-12 Teacher Certification**, under item c. **Optional Teaching Endorsements**, remove the following:
Biology
Chemistry
Earth Science
Economics
Geography
Physics
Political Science

Effective Fall 2024.
Establish a Minor in Smart Agricultural Systems in the Department of Department of Biosystems and Agricultural Engineering. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its March 7, 2024 meeting.

**a. Background Information:**

The overall purpose of the Minor in Smart Agricultural Systems (SAS) is to provide students with an understanding of current digital and emerging technologies such as artificial intelligence, machine learning, Internet of Things (IoT), sensors and automation that support modern, sustainable, productive, and resilient agriculture. The SAS Minor is a crosscutting minor providing broader employment opportunities to students in engineering majors. Students completing the minor will have the ability to: identify current and emerging technologies that monitor, measure, and analyze agriculture, food, fiber, feed, and bioenergy systems; and identify, develop, and deploy technological solutions for agricultural systems to improve system efficiency, sustainability, and resiliency.

Engineering technology and innovations have contributed to transforming agriculture into a highly productive and efficient sector of the U.S. economy. In 2021, the agrifood sector contributed roughly $1.264 trillion to the U.S. gross domestic product (GDP), a 5.4% share (USDA ERS). Total U.S. agricultural exports were valued at $177 billion in 2021, more than any other sector of the economy. Innovations such as the diesel engine, rural electrification, and agricultural mechanization have played a significant role in transforming agriculture and increasing farm productivity. In the early 1900s, nearly 2/3 of the 135 million U.S. population was engaged in farming. Today, this number is less than 5% while creating more than 10% of total U.S. employment in the agrifood related industries. The National Academy of Engineers (NAE) has listed agricultural mechanization as the 7th most significant engineering achievement of the 20th Century.

Global agrifood system faces many challenges including population growth, climate change, rapid urbanization, and diet transformation. It is expected that by the year 2100 the global population will reach 10.9 billion with Africa and Asia comprising more than 80% of the population. It is also projected that by 2050 the global middle class will increase to 70% resulting in a significant increase in demand for animal protein. According to the Global Harvest Initiative 2014 Gap Report (GHI, 2014), by 2030 demand for poultry will increase by 63%, milk by 55% and meat by 44%. Producing this extra amount will require land, water, and energy resources that are already limited. For example, agricultural land will shrink to 0.17 ha/capita in 2025 from 0.44 ha/capita in 1960. It is also expected that by 2030 energy demand will increase by 50% (IEA) and water by 30% (IFPRI). Clearly, to meet the growing demand, global agriculture will need to be productive, efficient, resilient, and sustainable. Emerging engineering technologies and innovations such as artificial intelligence, data analytics, sensors and sensing (including remote sensing), Internet of Things (IoT), automation, robotics and drone technologies hold much promise in meeting these challenges.

The objective of the proposed Minor in Smart Agricultural Systems is to prepare engineering majors in Applied Engineering Sciences, Biosystems Engineering, Computational Data Science, Computer Engineering, Computer Science, Electrical Engineering, and Mechanical Engineering for the rapidly evolving smart ag industry.

**b. Academic Programs Catalog Text:**

The Minor in Smart Agricultural Systems, which is administered by the Department of Biosystems and Agricultural Engineering, is available for students with majors in Applied Engineering Sciences, Biosystems Engineering, Computational Data Science, Computer Engineering, Computer Science, Electrical Engineering, Mechanical Engineering, and Lyman Briggs Computer Science who are interested in smart technology for management decision support and who plan to pursue careers in agriculture or natural resources. The minor will provide an opportunity for students to gain a working knowledge of digital technologies necessary to monitor and manage aspects of agriculture, food, natural resources, and bioenergy systems.

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. At least 10 unique credits counted towards the requirements for a student’s minor must not be used to fulfill the requirements for that student’s major.

Students who plan to complete the requirements of the minor should consult the Smart Agricultural Systems minor program coordinator in the Department of Biosystems Engineering and have their program of study approved in advance and in writing.

**Requirements for the Minor in Smart Agricultural Systems**

Students must complete a minimum of 16 credits from the following:

1. All of the following courses (10 credits):
   - BE 221 Introduction to Smart Agriculture 1
   - BE 321 Principles of Precision Agriculture 3
   - BE 421 Sensors and Robotics for Agricultural Systems 3
   - BE 422 Crop Modeling and Optimization 3

2. Two of the following courses (6 or 7 credits):
   - BE 449 Human Health Risk Analysis for Engineering Controls 3
   - BE 456 Electric Power and Control 3
   - BE 481 Water Resources Systems Analysis and Modeling 3
   - BE 482 Engineering Ecological Treatment Systems 3
   - CSE 404 Introduction to Machine Learning 3
   - CSE 440 Introduction to Artificial Intelligence 3
   - CSE 480 Database Systems 3
   - CSE 482 Big Data Analysis 3
   - CSS 467 Bioenergy Feedstock Production 3
   - ECE 416 Digital Control 3
   - ECE 417 Robotics 3
   - ECE 431 Smart Sensor Systems 3
   - ECE 434 Autonomous Vehicles 3
   - ECE 477 Microelectronic Fabrication 3
   - ME 417 Design of Alternative Energy Systems 3
   - ME 451 Control Systems 4
   - ME 456 Mechatronic System Design 3

Effective Fall 2024.

2. Change the requirements in the Master of Science degree in Computer Science in the Department of Computer Science and Engineering. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

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

      (1) Under the heading **System Design and Analysis**, add the following courses:

         - CSE 834 Advanced Topics in Automated Vehicles 3
         - CSE 893 Selected Topics in System Design and Analysis 3

      (2) Under the heading **Theory and Algorithms** add the following course:

         - CSE 894 Selected Topics in Theory and Algorithms 3

      Delete the following course:

         - CSE 836 Probabilistic Models and Algorithms in Computational Biology 3

      (3) Under the heading **Data Analysis and Applications** add the following courses:

         - CSE 850 Advanced Topics in Adversarial Machine Learning 3
         - CSE 851 Genetic Programming 3
         - CSE 895 Selected Topics in Data Analysis and Applications 3
Delete the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE 843</td>
<td>Language and Interaction</td>
<td>3</td>
</tr>
<tr>
<td>CSE 872</td>
<td>Advanced Computer Graphics</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Spring 2025.

3. Change the requirements in the Doctor of Philosophy degree in Computer Science in the Department of Computer Science and Engineering. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

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

(1) Under the heading System Design and Analysis, add the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3</td>
</tr>
<tr>
<td>CSE 893</td>
<td>Selected Topics in System Design and Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

(2) Under the heading Theory and Algorithms add the following course:

<table>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE 894</td>
<td>Selected Topics in Theory and Algorithms</td>
<td>3</td>
</tr>
</tbody>
</table>

Delete the following course:

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE 836</td>
<td>Probabilistic Models and Algorithms in Computational Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

(3) Under the heading Data Analysis and Applications add the following courses:

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<tr>
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</tr>
</thead>
<tbody>
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<td>Advanced Topics in Adversarial Machine Learning</td>
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</tr>
<tr>
<td>CSE 872</td>
<td>Advanced Computer Graphics</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Spring 2025.

COLLEGE OF HUMAN MEDICINE

1. Change the requirements for the Master of Public Health degree in Public Health in the College of Human Medicine. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

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

a. Under the heading Requirements for the Master of Public Health Degree in Public Health make the following change:

(1) Change all 'HM' required courses to 'PH'.
(2) Add the following concentrations:

**Data Management and Analytics Concentration**
Provides students with the data management and analytic skillset needed to effectively utilize a variety of public health and health care data sources for applied public health practice and research purposes, while integrating a data equity framework into all aspects of this work. Students completing this concentration will possess the skills to access, manage, assess, analyze, and report findings from a myriad of data sources commonly used in public health such as, vital records, surveys, surveillance, and in the healthcare delivery setting such as, administrative claims data, electronic medical records data. These concentration courses will prepare MPH students with the applied skills needed to pursue careers in public health positions which require skills in data management and analyses.

All the following courses (9 credits):
- PH 826 Data Management in Public Health Practice 3
- PH 878 Applied Biostatistics for Public Health Practitioners 3
- PH 829 Public Health and Healthcare Delivery Data 3

**Rural Public Health Concentration**
Provides students with sufficient skills and knowledge to effectively work as public health leaders and practitioners in rural communities, both globally and domestically. Students completing this concentration will develop an understanding of how unique social, cultural, political, and environmental characteristics of rural communities, as well as structural, systemic, and historical influences, affect everything from rural health and well-being to public health and health care delivery, policy development, collaborative opportunities, and advocacy strategies. Courses in the concentration will prepare MPH students with a unique set of applied skills needed to pursue careers in rural public health.

All the following courses (9 credits):
- PH 830 Foundations of Rural Public Health 3
- PH 834 Drivers of Rural Health 3
- PH 839 Rural Public Health Policy and Advocacy 3

Effective Fall 2024.

**COLLEGE OF NATURAL SCIENCE**

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

   a. Under the heading Requirements for the Bachelor of Science Degree in Neuroscience replace item 3. with the following:

      a. One of the following groups of courses (8 or 9 credits):
         (1) BS 161 Cell and Molecular Biology 3
         BS 162 Organismal and Population Biology 3
         BS 171 Cell and Molecular Biology Laboratory 2
         (2) BS 181H Honors Cell and Molecular Biology 3
         BS 182H Honors Organismal and Population Biology 3
         BS 191H Honors Cell and Molecular Biology Laboratory 2
         (3) LB 144 Biology I: Organismal Biology 4
         LB 145 Biology II: Cellular and Molecular Biology 5

      b. One of the following groups of courses (7 or 8 credits):
         (1) CEM 141 General Chemistry 4
         CEM 142 General and Inorganic Chemistry 3
         (2) CEM 151 General and Descriptive Chemistry 4
         CEM 152 Principles of Chemistry 3
         (3) CEM 181H Honors Chemistry I 4
         CEM 182H Honors Chemistry II 4
### Part I – New Programs and Program Changes

(4) **LB 171** Principles of Chemistry I    4  
    **LB 172** Principles of Chemistry II    3  

c. One of the following courses (1 or 2 credits):  
   - **CEM 161L** Chemistry Laboratory I    1  
   - **LB 171L** Introductory Chemistry Laboratory    1  
   - **CEM 185H** Honors Chemistry Laboratory I    2  

d. Both of the following courses (6 credits):  
   - **CEM 251** Organic Chemistry I    3  
   - **CEM 252** Organic Chemistry II    3  

e. One of the following groups of courses (6 or 8 credits):  
   1. **PHY 221** Studio Physics for Life Scientists I    4  
       **PHY 222** Studio Physics for Life Scientists II    4  
   2. **PHY 231** Introductory Physics I    3  
       **PHY 232** Introductory Physics II    3  
   3. **PHY 183** Physics for Scientists and Engineers I    4  
       **PHY 184** Physics for Scientists and Engineers II    4  
   4. **PHY 193H** Honors Physics I-Mechanics    4  
       **PHY 294H** Honors Physics II-Electromagnetism    4  
   5. **LB 273** Physics I    4  
      **LB 274** Physics II    4  

f. One of the following courses (3 or 4 credits):  
   - **MTH 124** Survey of Calculus I    3  
   - **MTH 132** Calculus I    3  
   - **MTH 152H** Honors Calculus I    3  
   - **LB 118** Calculus I    4  

g. One of the following courses (3 or 4 credits):  
   - **STT 201** Statistical Methods    4  
   - **STT 231** Statistics for Scientists    3  
   - **STT 421** Statistics I    3  
   - **STT 464** Statistics for Biologists    3  

h. Both of the following courses (8 credits):  
   - **BMB 401** Comprehensive Biochemistry    4  
   - **PSY 101** Introductory Psychology    4  

i. One of the following groups of courses (4 or 8 credits):  
   1. **PSL 310** Physiology for Pre-Health Professionals    4  
   2. **PSL 431** Human Physiology I    4  
      **PSL 432** Human Physiology II    4  

k. All of the following courses (15 credits):  
   - **NEU 101** Frontiers in Neuroscience    1  
   - **NEU 301** Introduction to Neuroscience I    3  
   - **NEU 302** Introduction to Neuroscience II    3  
   - **NEU 311L** Neuroscience Laboratory (W)    2  
   - **NEU 401** Cellular and Molecular Neuroscience    3  
   - **NEU 402** Behavioral and Cognitive Neuroscience    3  

l. One of the following courses (3 or 4 credits):  
   - **NEU 403** Communication in Neuroscience (W)    3  
   - **LB 492** Senior Seminar (W)    4  

m. Complete a minimum of 3 credits from the following:  
   - **NEU 310** Psychology and Biology of Human Sexuality    3  
   - **NEU 416** Development of the Nervous System Through the Lifespan    3  
   - **NEU 417** Instrumental Methods of Analysis in Neuroscience    3  
   - **NEU 420** Neurobiology of Disease    3  
   - **NEU 440** Synaptic Transmission    3  
   - **NEU 450** The Autonomic Nervous System    3  
   - **NEU 460** Current Approaches in Molecular and Cellular Neuroscience    3  
   - **NEU 492** Special Topics in Neuroscience    1 to 3  
   - **PHM 422** Fundamentals of Neuropharmacology    2  
   - **PHM 431** Pharmacology of Drug Addiction    3  

n. One of the following courses (3 or 4 credits):  
   - **IBIO 341** Fundamental Genetics    4  
   - **MMG 409** Eukaryotic Cell Biology    3  

Effective Fall 2024.
2. Change the name of the Bachelor of Arts degree in Computational Mathematics to Computational and Applied Mathematics in the Department of Mathematics.

No new students are to be admitted to the Bachelor of Arts degree in Computational Mathematics effective Fall 2024. No students are to be readmitted to Bachelor of Arts degree in Computational Mathematics effective Fall 2024. Effective Fall 2029, coding for the Bachelor of Arts degree in Computational Mathematics will be discontinued and the program will no longer be available in the Department of Mathematics. Students admitted to the bachelor’s degree prior to Fall 2024 will be awarded a Bachelor of Arts degree in Computational Mathematics in the Department of Mathematics. Students admitted to the bachelor’s degree Fall 2024 and forward will be awarded a Bachelor of Arts degree in Computational and Applied Mathematics in the Department of Mathematics.

3. Change the requirements for the Bachelor of Arts degree in Computational and Applied Mathematics in the Department of Mathematics.

a. Under the heading Computational and Applied Mathematics make the following changes:

(1) In item 1., delete the following statement:

Students who are in the teacher certification program are required to complete Mathematics 330 or 432 and Statistics and Probability 430.

(2) Replace item 3. with the following:

a. The following courses outside the Department of Mathematics (a minimum of 27 credits):

(1) One course of at least 3 credits in biological science, entomology, microbiology, physiology, plant biology, or integrative biology.

(2) One of the following courses (4 credits):

- CEM 141 General Chemistry 4
- CEM 151 General and Descriptive Chemistry 4
- CEM 181H Honors Chemistry I 4
- LB 171 Principles of Chemistry I 4

(3) One of the following courses (4 or 5 credits):

- PHY 183 Physics for Scientists and Engineers I 4
- LB 273 Physics I 4
- PHY 173 Studio Physics for Scientists and Engineers I 5
- PHY 193H Honors Physics I – Mechanics 4

(4) At least 2 credits in laboratory in biological science, chemistry, entomology, microbiology, physiology, plant biology, or integrative biology.

(5) A minimum of 6 credits beyond the university requirements in courses from the College of Arts and Letters or the College of Social Science approved by the student’s academic advisor.

(6) One of the following groups of courses (8 credits):

(a) CSE 231 Introduction to Programming I 4
(b) CSE 232 Introduction to Programming II 4
(c) CMSE 201 Computational Modelling and Data Analysis I 4
(d) CMSE 202 Computational Modelling and Data Analysis II 4

b. The following courses from the Department of Mathematics:

(1) One course from each of the following groups (11 or 12 credits):

(a) MTH 132 Calculus I 3
(b) MTH 152H Honors Calculus I 3
(c) LB 118 Calculus I 4

(b) MTH 133 Calculus II 4
(b) MTH 153H Honors Calculus II 4
(c) LB 119 Calculus II 4

(c) MTH 234 Multivariable Calculus 4
(d) MTH 254H Honors Multivariable Calculus 4
(e) LB 220 Calculus III 4
PART I – NEW PROGRAMS AND PROGRAM CHANGES

(2) One of the following groups (4 or 7 credits):
(a) MTH 299 Transitions 4
MTH 309 Linear Algebra I 3
(b) MTH 299 Transitions 4
MTH 314 Matrix Algebra with Computational Applications 3
(c) MTH 317H Honors Linear Algebra 4

(3) Completion of one of the following groups of courses (12 credits):
(a) Differential Equations and Numerical Methods
   (i) One of the following courses:
       MTH 235 Differential Equations 3
       MTH 340 Ordinary Differential Equations I 3
       MTH 347H Honors Ordinary Differential Equations 3
   (ii) One of the following courses:
       MTH 320 Analysis I 3
       MTH 327H Honors Introduction to Analysis 3
   (iii) The following course:
       MTH 451 Numerical Analysis I 3
   (iv) One of the following courses:
       MTH 441 Ordinary Differential Equations II 3
       MTH 442 Partial Differential Equations 3
       MTH 452 Numerical Analysis II 3
(b) Probability and Discrete Mathematics
   (i) The following course:
       STT 441 Probability and Statistics I: Probability 3
   (ii) One of the following courses:
       MTH 320 Analysis I 3
       MTH 327H Honors Introduction to Analysis 3
   (iii) Both of the following courses:
       MTH 481 Discrete Mathematics I 3
       MTH 482 Discrete Mathematics II 3
(c) Applied Algebra and Discrete Mathematics
   (i) One of the following courses:
       MTH 310 Abstract Algebra I and Number Theory 3
       MTH 418H Honors Algebra I 3
   (ii) All of the following courses:
       MTH 416 Introduction to Algebraic Coding 3
       MTH 481 Discrete Mathematics I 3
       MTH 482 Discrete Mathematics II 3
(d) Mathematical Machine Learning
   (i) One of the following courses:
       MTH 320 Analysis I 3
       MTH 327H Honors Introduction to Analysis 3
   (ii) All of the following courses:
       MTH 483 Mathematical Machine Learning 3
       STT 441 Probability and Statistics I: Probability 3
       STT 442 Probability and Statistics II: Statistics 3

(4) Both of the following courses (6 credits):
MTH 415 Applied Linear Algebra 3
MTH 496 Capstone in Mathematics (W) 3
(5) Complete five elective courses from the following lists of electives with at least two from the Mathematics Electives list. All courses listed may only be used if not being used to meet a course requirement in requirement (3) above (15 to 20 credits): 

**Mathematics Electives**

- MTH 310  Abstract Algebra    3
  - MTH 418H  Honors Algebra I    3
  - MTH 320  Analysis I    3
  - MTH 327  Honors Introduction to Analysis    3
  - MTH 411  Abstract Algebra II    3
  - MTH 419H  Honors Algebra II    3
  - MTH 416  Introduction to Algebraic Coding    3
  - MTH 417  Topics in Number Theory    3
  - MTH 421  Analysis II    3
  - MTH 425  Complex Analysis    3
  - MTH 441  Ordinary Differential Equations II    3
  - MTH 442  Partial Differential Equations    3
  - MTH 451  Numerical Analysis I    3
  - MTH 452  Numerical Analysis II    3
  - MTH 457  Introduction to Financial Mathematics    3
  - MTH 461  Metric and Topological Spaces    3
  - MTH 481  Discrete Mathematics I    3
  - MTH 482  Discrete Mathematics II    3
  - MTH 483  Mathematical Machine Learning    3
  - Other 400-level or above MTH courses approved by the Department of Mathematics.

**Other Electives**

Approval of the College of Engineering is required to enroll in all CSE or ECE courses listed.

- CMSE 404  Introduction to Machine Learning    3
- CSE 402  Biometrics and Pattern Recognition    3
- CSE 404  Introduction to Machine Learning    3
- CSE 425  Introduction to Computer Security    3
- CSE 450  Translation of Programming Languages    3
- CSE 460  Computability and Formal Language Theory    3
- CSE 472  Computer Graphics    3
- CSE 482  Big Data Analysis    3
- ECE 305  Electromagnetic Fields and Waves I    4
- ECE 366  Introduction to Signal Processing    3
- ECE 405  Electromagnetic Fields and Waves II    4
- ECE 446  Biomedical Signal Processing    3
- ECE 447  Introduction to Biomedical Imaging    3
- ECE 449  Fundamentals of Acoustics    3
- ECE 457  Communication Systems    3
- PHY 410  Thermal and Statistical Physics    3
- PHY 415  Methods of Theoretical Physics    4
- PHY 422  Classical Mechanics II    3
- PHY 471  Quantum Physics I    3
- PHY 472  Quantum Physics II    3
- PHY 480  Computational Physics    3
- PHY 481  Electricity and Magnetism I    3
- PHY 482  Electricity and Magnetism II    3
- STT 381  Fundamentals of Data Science Methods    4
- STT 441  Probability and Statistics I: Probability    3
- STT 442  Probability and Statistics II: Statistics    3
- STT 455  Actuarial Models I    3
- STT 461  Computations in Probability and Statistics    3
- STT 465  Bayesian Statistical Methods    3
Other 400-level or above courses approved by the Department of Mathematics.

Effective Fall 2024.

4. Change the name of the Bachelor of Science degree in Computational Mathematics to Computational and Applied Mathematics in the Department of Mathematics.

No new students are to be admitted to the Bachelor of Science degree in Computational Mathematics effective Fall 2024. No students are to be readmitted to Bachelor of Science degree in Computational Mathematics effective Fall 2024. Effective Fall 2029, coding for the Bachelor of Science degree in Computational Mathematics will be discontinued and the program will no longer be available in the Department of Mathematics. Students admitted to the bachelor’s degree prior to Fall 2024 will be awarded a Bachelor of Science degree in Computational Mathematics in the Department of Mathematics. Students admitted to the bachelor’s degree Fall 2024 and forward will be awarded a Bachelor of Science degree in Computational and Applied Mathematics in the Department of Mathematics.

5. Change the requirements for the Bachelor of Science degree in Computational and Applied Mathematics in the Department of Mathematics.

a. Under the heading Computational and Applied Mathematics make the following changes:

(1) In item 1., delete the following statement:

Students who are in the teacher certification program are required to complete Mathematics 330 or 432 and Statistics and Probability 430.

(2) Replace item 3. with the following:

a. The following courses outside the Department of Mathematics (a minimum of 28 credits):

(1) One course of at least 3 credits in biological science, entomology, microbiology, physiology, plant biology, or integrative biology.

(2) One course from each of the following groups (8 or 10 credits):

   (a)  CEM 141 General Chemistry 4
   CEM 151 General and Descriptive Chemistry 4
   CEM 181H Honors Chemistry I 4
   LB 171 Principles of Chemistry I 4
   
   (b)  CEM 142 General and Inorganic Chemistry 3
   CEM 152 Principles of Chemistry 3
   CEM 182H Honors Chemistry II 4
   LB 172 Principles of Chemistry II 3
   
   (c)  CEM 161 Chemistry Laboratory I 1
   CEM 185H Honors Chemistry Laboratory 2
   LB 171L Introductory Chemistry Laboratory I 1

(3) One course from each of the following groups (8 or 10 credits):

   (a)  PHY 183 Physics for Scientists and Engineers I 4
   LB 273 Physics I 4
   PHY 173 Studio Physics for Scientists and Engineers I 5
   PHY 193H Honors Physics I – Mechanics 4
   
   (b)  LB 274 Physics II 4
   PHY 184 Physics for Scientists and Engineers I 4
   PHY 174 Physics II 5
   PHY 294H Honors Physics II – Electromagnetism 4

(4) At least 1 credit in laboratory in biological science, chemistry, entomology, microbiology, physiology, plant biology, or integrative biology.
(5) One of the following groups of courses (8 credits):
(a) CSE 231 Introduction to Programming I 4
    CSE 232 Introduction to Programming II 4
(b) CMSE 201 Computational Modelling and Data Analysis I 4
    CMSE 202 Computational Modelling and Data Analysis II 4

b. The following courses from the Department of Mathematics:
(1) One course from each of the following groups (11 or 12 credits):
(a) MTH 132 Calculus I 3
    MTH 152H Honors Calculus I 3
    LB 118 Calculus I 4
(b) MTH 133 Calculus II 4
    MTH 153H Honors Calculus II 4
    LB 119 Calculus II 4
(c) MTH 234 Multivariable Calculus 4
    MTH 254H Honors Multivariable Calculus 4
    LB 220 Calculus III 4

(2) One of the following groups (4 or 7 credits):
(a) MTH 299 Transitions 4
    MTH 309 Linear Algebra I 3
(b) MTH 299 Transitions 4
    MTH 314 Matrix Algebra with Computational Applications 3
(c) MTH 317H Honors Linear Algebra 4

(3) Completion of one of the following groups of courses (12 credits):
(a) Differential Equations and Numerical Methods
    (i) One of the following courses:
        MTH 235 Differential Equations 3
        MTH 340 Ordinary Differential Equations I 3
        MTH 347H Honors Ordinary Differential Equations 3
    (ii) One of the following courses:
        MTH 320 Analysis I 3
        MTH 327H Honors Introduction to Analysis 3
    (iii) The following course:
        MTH 451 Numerical Analysis I 3
    (iv) One of the following courses:
        MTH 441 Ordinary Differential Equations II 3
        MTH 442 Partial Differential Equations 3
        MTH 452 Numerical Analysis II 3

(b) Probability and Discrete Mathematics
    (i) The following course:
        STT 441 Probability and Statistics I: Probability 3
    (ii) One of the following courses:
        MTH 320 Analysis I 3
        MTH 327H Honors Introduction to Analysis 3
    (iii) Both of the following courses:
        MTH 481 Discrete Mathematics I 3
        MTH 482 Discrete Mathematics II 3

(c) Applied Algebra and Discrete Mathematics
    (i) One of the following courses:
        MTH 310 Abstract Algebra I and Number Theory 3
        MTH 418H Honors Algebra I 3
PART I – NEW PROGRAMS AND PROGRAM CHANGES

(ii) All of the following courses:
MTH 416 Introduction to Algebraic Coding 3
MTH 481 Discrete Mathematics I 3
MTH 482 Discrete Mathematics II 3

Mathematical Machine Learning
(i) One of the following courses:
MTH 320 Analysis I 3
MTH 327H Honors Introduction to Analysis 3

(ii) All of the following courses:
MTH 483 Mathematical Machine Learning 3
STT 441 Probability and Statistics I: Probability 3
STT 442 Probability and Statistics II: Statistics 3

(4) Both of the following courses (6 credits):
MTH 415 Applied Linear Algebra 3
MTH 496 Capstone in Mathematics (W) 3

(5) Complete five elective courses from the following lists of electives with at least two from the Mathematics Electives list. All courses listed may only be used if not being used to meet a course requirement in requirement (3) above (15 to 20 credits):

Mathematics Electives
MTH 310 Abstract Algebra 3
Or
MTH 418H Honors Algebra I 3
MTH 320 Analysis I 3
or
MTH 327H Honors Introduction to Analysis 3
MTH 411 Abstract Algebra II 3
or
MTH 419H Honors Algebra II 3
MTH 416 Introduction to Algebraic Coding 3
MTH 417 Topics in Number Theory 3
MTH 421 Analysis II 3
or
MTH 429H Honors Real Analysis 3
MTH 425 Complex Analysis 3
MTH 441 Ordinary Differential Equations II 3
MTH 442 Partial Differential Equations 3
MTH 451 Numerical Analysis I 3
MTH 452 Numerical Analysis II 3
MTH 457 Introduction to Financial Mathematics 3
MTH 461 Metric and Topological Spaces 3
MTH 481 Discrete Mathematics I 3
MTH 482 Discrete Mathematics II 3
MTH 483 Mathematical Machine Learning 3

Other Electives
Approval of the College of Engineering is required to enroll in all CSE or ECE courses listed.
CMSE 404 Introduction to Machine Learning 3
CSE 402 Biometrics and Pattern Recognition 3
CSE 404 Introduction to Machine Learning 3
CSE 425 Introduction to Computer Security 3
CSE 450 Translation of Programming Languages 3
CSE 460 Computability and Formal Language Theory 3
CSE 472 Computer Graphics 3
CSE 482 Big Data Analysis 3
ECE 305 Electromagnetic Fields and Waves I 4
**PART I – NEW PROGRAMS AND PROGRAM CHANGES**

1. ECE 366 Introduction to Signal Processing 3
2. ECE 405 Electromagnetic Fields and Waves II 4
3. ECE 446 Biomedical Signal Processing 3
4. ECE 447 Introduction to Biomedical Imaging 3
5. ECE 449 Fundamentals of Acoustics 3
6. ECE 457 Communication Systems 3
7. PHY 410 Thermal and Statistical Physics 3
8. PHY 415 Methods of Theoretical Physics 4
9. PHY 422 Classical Mechanics II 3
10. PHY 471 Quantum Physics I 3
11. PHY 472 Quantum Physics II 3
12. PHY 480 Computational Physics 3
13. PHY 481 Electricity and Magnetism I 3
14. PHY 482 Electricity and Magnetism II 3
15. STT 381 Fundamentals of Data Science Methods 4
16. STT 441 Probability and Statistics I: Probability 3
17. STT 442 Probability and Statistics II: Statistics 3
18. STT 455 Actuarial Models I 3
19. STT 461 Computations in Probability and Statistics 3
20. STT 465 Bayesian Statistical Methods 3

Other 400-level or above courses approved by the Department of Mathematics.

Effective Fall 2024.

6. Change the requirements for the **Bachelor of Arts** degree in **Mathematics, Advanced** in the Department of Mathematics.

   a. Under the heading **Requirements for the Bachelor of Arts Degree in Mathematics, Advanced** make the following changes:

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

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

          - BS 161 Cell and Molecular Biology 3
          - IBIO 150 Integrating Biology: From DNA to Populations 3
          - PLB 105 Plant Biology 3
          - ENT 205 Pests, Society, and Environment 3
          - PSL 250 Introductory Physiology 4

      (2) Delete item 3. b.

      (3) Reletter item 3. c. to item 3. b. and make the following change in item (4):

          (a) Change the total credits from ‘25’ to ‘22’.

          (b) Delete the following course:

              MTH 428H Honors Complex Analysis 3

      (4) Reletter item 3. d. to item 3. c. and replace with the following:

          A total of 15 credits in electives.

          Three of the courses (9 credits) are to be selected from any MTH course at the 800-level or above, or any course approved by the Mathematics Advanced program for satisfying this requirement, or any course from the following list:

          MTH 416 Introduction to Algebraic Coding 3
          MTH 417 Topics in Number Theory 3
          MTH 425 Complex Analysis 3
          MTH 441 Ordinary Differential Equations II 3
          MTH 442 Partial Differential Equations 3
          MTH 451 Numerical Analysis I 3
PART I – NEW PROGRAMS AND PROGRAM CHANGES

MTH 452 Numerical Analysis II 3
MTH 461 Metric and Topological Spaces 3
MTH 481 Discrete Mathematics I 3
MTH 482 Discrete Mathematics II 3
MTH 492H Undergraduate Thesis (W) 3

Two of the courses (6 credits) are to be selected from any MTH course at the 400 level or above (excluding MTH 411 and 421), or any course approved by the Mathematics Advanced program for satisfying this requirement, or any course from the following list:

CMSE 820 Mathematical Foundations of Data Science 3
CMSE 821 Numerical Methods for Differential Equations 3
CMSE 823 Numerical Linear Algebra 3
CSE 425 Introduction to Computer Security 3
CSE 450 Translation of Programming Languages 3
CSE 460 Computability and Formal Language Theory 3
CSE 472 Computer Graphics 3
CSE 802 Pattern Recognition and Analysis 3
CSE 803 Computer Vision 3
CSE 814 Computer Aided Verification 3
CSE 830 Design and Theory of Algorithms 3
CSE 835 Algorithmic Graph Theory 3
CSE 847 Machine Learning 3
CSE 860 Foundations of Computing 3
CSE 881 Data Mining 3
PHL 432 Logic and its Metatheory 4
PHY 410 Thermal and Statistical Physics 3
PHY 415 Methods of Theoretical Physics 4
PHY 422 Classical Mechanics II 3
PHY 471 Quantum Physics I 3
PHY 472 Quantum Physics II 3
PHY 480 Computational Physics 3
PHY 481 Electricity and Magnetism I 3
PHY 482 Electricity and Magnetism II 3
STT 861 Theory of Probability and Statistics I 3
STT 862 Theory of Probability and Statistics II 3
STT 881 Theory of Probability I 3
STT 882 Theory of Probability II 3
STT 886 Stochastic Processes and Applications 3

Effective Fall 2024.

7. Change the requirements for the Bachelor of Science degree in Mathematics, Advanced in the Department of Mathematics.

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

(1) In item 3. a., change the total credits from ‘21 to 25’ to ‘20 to 25’.

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

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS 161</td>
<td>Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>IBIO 150</td>
<td>Integrating Biology: From DNA to Populations</td>
<td>3</td>
</tr>
<tr>
<td>PLB 105</td>
<td>Plant Biology</td>
<td>3</td>
</tr>
<tr>
<td>ENT 205</td>
<td>Pests, Society, and Environment</td>
<td>3</td>
</tr>
<tr>
<td>PSL 250</td>
<td>Introductory Physiology</td>
<td>4</td>
</tr>
</tbody>
</table>

(3) In item 3. a. (4) change the credits from ‘2’ to ‘1’.

(4) Delete item 3. b.
(5) Reletter item 3. c. to item 3. b. and make the following change in item (4):

(a) Change the total credits from ‘25’ to ‘22’.

(b) Delete the following course:

MTH 428H Honors Complex Analysis 3

Effective Fall 2024.

(6) Reletter item 3. d. to item 3. c. and replace with the following:

A total of 15 credits in electives.

Three of the courses (9 credits) are to be selected from any MTH course at the 800-level or above, or any course approved by the Mathematics Advanced program for satisfying this requirement, or any course from the following list:

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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 416</td>
<td>Introduction to Algebraic Coding</td>
<td>3</td>
</tr>
<tr>
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<td>Topics in Number Theory</td>
<td>3</td>
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</tr>
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<td>MTH 441</td>
<td>Ordinary Differential Equations II</td>
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</tr>
<tr>
<td>MTH 442</td>
<td>Partial Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>MTH 451</td>
<td>Numerical Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>MTH 452</td>
<td>Numerical Analysis II</td>
<td>3</td>
</tr>
<tr>
<td>MTH 461</td>
<td>Metric and Topological Spaces</td>
<td>3</td>
</tr>
<tr>
<td>MTH 481</td>
<td>Discrete Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>MTH 482</td>
<td>Discrete Mathematics II</td>
<td>3</td>
</tr>
<tr>
<td>MTH 492H</td>
<td>Undergraduate Thesis (W)</td>
<td>3</td>
</tr>
</tbody>
</table>

Two of the courses (6 credits) are to be selected from any MTH course at the 400 level or above (excluding MTH 411 and 421), or any course approved by the Mathematics Advanced program for satisfying this requirement, or any course from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMSE 820</td>
<td>Mathematical Foundations of Data Science</td>
<td>3</td>
</tr>
<tr>
<td>CMSE 821</td>
<td>Numerical Methods for Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>CMSE 823</td>
<td>Numerical Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>CSE 425</td>
<td>Introduction to Computer Security</td>
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</tr>
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<td>PHY 422</td>
<td>Classical Mechanics II</td>
<td>3</td>
</tr>
<tr>
<td>PHY 471</td>
<td>Quantum Physics I</td>
<td>3</td>
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</tr>
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<td>Computational Physics</td>
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</tr>
<tr>
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<td>Electricity and Magnetism</td>
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<tr>
<td>STT 861</td>
<td>Theory of Probability and Statistics I</td>
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<tr>
<td>STT 882</td>
<td>Theory of Probability II</td>
<td>3</td>
</tr>
<tr>
<td>STT 886</td>
<td>Stochastic Processes and Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Fall 2024.
COLLEGE OF OSTEOPATHIC MEDICINE

1. Change the requirement for the Master of Science degree in Basic Medical Science in the College of Osteopathic Medicine. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

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

      (1) Add the option of Plan B (without thesis).

      (2) Delete item 3. and 4. and replace with the following:

      Additional Requirements for Plan A
      1.  Complete the following course:
          OST 899 Master's Thesis Research          4
          This requirement must be completed within one full semester of entry into the program.

      Additional Requirements for Plan B
      1.  Completion of a final examination or evaluation.

   Effective Fall 2024.

COLLEGE OF SOCIAL SCIENCE

1. Delete the curriculum and degree requirements for the Graduate Specialization in Global Urban Studies in the College of Social Science. The University Committee on Graduate Education (UCGS) provided consultative commentary to the Provost after considering this request. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Graduate Studies.

No new students are to be admitted to the program effective Spring 2024. No students are to be readmitted to the program effective Spring 2024. Effective Summer 2028, coding for the program will be discontinued and the program will no longer be available in the College of Social Science. Students who have not met the requirements for the Graduate Specialization in Global Urban Studies through the College of Social Science prior to Summer 2028 will have to change their specialization.

   Note: This program has been in moratorium since Spring 2024.

2. Change the requirements for the Master in Urban and Regional Planning degree in Urban and Regional Planning in the School of Planning, Design and Construction. The University Committee on Graduate Studies (UCGS) approved this request at its April 15, 2024 meeting.

   a. Under the heading Requirements for the Master in Urban and Regional Planning Degree in Urban and Regional Planning make the following changes:

      (1) Under the heading Additional Requirements for Plan A, delete the following:

          1.  Complete the following course (credits):
              UP 816 Advanced Research Methods for Planning and Development       3

      (2) Under the heading Additional Requirements for Plan B, in item 1. change the credits from ‘Nine’ to ‘Six.

   Effective Fall 2024.
PART II - NEW COURSES

DEPARTMENT OF ADVERTISING AND PUBLIC RELATIONS

ADV 200  The World of Advertising
Fall of every year. Spring of every year. Summer of every year. 2(2-0) R: Open to undergraduate students.
Introduction to the role of advertising in business and commerce. Historical evolution, impact on culture and society, creative and placement processes, the future of advertising. Effective Fall Semester 2025

ADV 482  Project Management for Advertising and Public Relations
Fall of every year. Spring of every year. 3(3-0) R: Open to undergraduate students in the College of Communication Arts and Sciences or in the Department of Advertising and Public Relations or in the Advertising Management major.
Introduction to project management with a focus on projects typically found in the fields of advertising and public relations. Study and practice the fundamentals of managing a variety of projects from planning events to creating promotional materials. Effective Fall Semester 2025

INSTITUTE OF AGRICULTURAL TECHNOLOGY

AT 215  Agriculture Employee Management
On Demand. 3(3-0) R: Open to students in the Institute of Agricultural Technology.
Key concepts, techniques, and issues in agricultural employee management and their impact on agricultural operations. Effective Summer Semester 2024

AT 221  Unmanned Aircraft Systems (UAS) in Agriculture
Spring of every year. 4(2-4) R: Open to students in the Institute of Agricultural Technology and open to undergraduate students in the College of Agriculture and Natural Resources. Approval of department; application required.
Concepts and field work necessary to conduct safe operations with unmanned aerial systems used in agricultural operations. Field trips required.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment. Effective Spring Semester 2025

DEPARTMENT OF BIOSYSTEMS AND AGRICULTURAL ENGINEERING

BE 221  Introduction to Smart Agriculture
Spring of every year. 1(1-1) Interdepartmental with Engineering P: (MTH 114 or MTH 116 or LB 117) or ((MTH 132 or concurrently) or (MTH 152H or concurrently) or (LB 118 or concurrently))
Concepts of smart agriculture and its role in addressing global challenges. Sustainable agricultural systems management incorporating digital tools, AI, and machine learning. Effective Fall Semester 2024

BE 321  Principles of Precision Agriculture
Fall of every year. 3(2-2) P: BE 221 or concurrently or approval of department
Principles of precision agriculture utilizing GPS, GIS, data acquisition, analysis, and prescriptive application. Mapping, prescriptive software, and informed decision making for sustainable and resilient agriculture.
SA: TSM 343
Effective Fall Semester 2024
PART II – NEW COURSES

BE 421   Sensors and Robotics for Agricultural Systems
Fall of every year. 3(2-2) P: BE 321 or concurrently R: Open to juniors or seniors in the College of
Engineering or approval of department.
  Comprehensive introduction to the fundamentals and applications of sensing and robotics
technologies in agricultural systems.
  Effective Fall Semester 2024

BE 422   Crop Modeling and Optimization
Spring of every year. 3(2-2) P: BE 321 or concurrently R: Open to juniors or seniors in the College of
Engineering or approval of department.
  An in-depth exploration of the theory and practical applications of crop modeling in
agriculture and agroecosystems.
  Effective Fall Semester 2024

DEPARTMENT OF COMMUNITY SUSTAINABILITY

CSUS 472   Designing and Managing Programmed Experiences
Spring of odd years. 3(3-0) P: (CSUS 200 and CSUS 273) and completion of Tier I writing
requirement R: Open to juniors or seniors or graduate students.
  Theories, concepts and tools used to design and facilitate life-enhancing human
experiences in sustainable natural resources recreation, parks, and tourism.
  Effective Spring Semester 2025

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CSE 834   Advanced Topics in Automated Vehicles
Spring of every year. 3(3-0) Interdepartmental with Electrical and Computer Engineering RB:
  Algorithms, programming in Python or equivalent, basic knowledge of probability and statistics. R:
  Open to graduate students in the Department of Computer Science and Engineering or in the
Department of Electrical and Computer Engineering or approval of department.
  Preparation for hands-on research into automated and connected vehicles.
  Effective Spring Semester 2025

CSE 850   Advanced Topics in Adversarial Machine Learning
Spring of every year. 3(3-0) P: CSE 840 R: Open to graduate students in the Department of
Computer Science and Engineering.
  Preparation for foundational and applied research regarding the robustness and
trustworthiness of today’s deep learning systems.
  Effective Spring Semester 2025

CSE 851   Genetic Programming
Fall of every year. 3(3-0) R: Open to graduate students in the Department of Computer Science and
Engineering or approval of department.
  Overview of current techniques and applications of genetic programming, with occasional
excursions into the history of fields like Artificial Intelligence, Machine Learning and
automatic programming in general.
  Effective Spring Semester 2025

CSE 893   Selected Topics in System Design and Analysis
On Demand. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R:
  Open to graduate students in the Department of Computer Science and Engineering or approval of
department. A student may earn a maximum of 9 credits in all enrollments for CSE 891, CSE 893,
CSE 894, and CSE 895 combined.
  Selected topics in System design and analysis of current interest and importance but not
covered in a regular course.
  Effective Spring Semester 2025
CSE 894  Selected Topics in Theory and Algorithms
On Demand. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R:
Open to graduate students in the Department of Computer Science and Engineering or approval of
department. A student may earn a maximum of 9 credits in all enrollments for CSE 891, CSE 893,
CSE 894, and CSE 895 combined.
Selected topics in theory and algorithms of current interest and importance.
Effective Spring Semester 2025

CSE 895  Selected Topics in Data Analysis and Applications
On Demand. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P:
CSE 840 R: Open to graduate students in the Department of Computer Science and Engineering or
approval of department. A student may earn a maximum of 9 credits in all enrollments for CSE 891,
CSE 893, CSE 894, and CSE 895 combined.
Selected topics in data analysis and applications of current interest and importance.
Effective Spring Semester 2025

DEPARTMENT OF COUNSELING, EDUCATIONAL PSYCHOLOGY, AND SPECIAL EDUCATION

CEP 839  Foundations of Clinical Mental Health Counseling
Fall of every year. 3(3-0) R: Open to master's students in the Clinical Mental Health Counseling
major.
Introduction and overview of the profession of clinical mental health counseling. The course
covers history, legislation, philosophical foundations, roles and functions, professional
identity, professional organizations, credentials, and general practice.
Effective Fall Semester 2024

CEP 849  Diagnosis and Psychopathology
Spring of every year. 3(3-0) P: CEP 839 and CEP 861 and HDFS 810 and CEP 874 and CEP
877 R: Open to master's students in the Clinical Mental Health Counseling major.
Etiology and nomenclature of mental, behavioral and neurodevelopmental disorders, with
emphasis on differential diagnosis, diagnostic classification systems, and cultural and
developmental implications for treatment planning in mental health counseling.
Effective Spring Semester 2025

CEP 859  Crisis and Trauma Counseling
Spring of every year. 3(3-0) P: CEP 839 and CEP 861 and HDFS 810 and CEP 874 and CEP
877 RB: Students should have an undergraduate degree and should be in human services
majors. R: Open to master's students in the Clinical Mental Health Counseling major.
Crisis and trauma counseling guided by accreditation standards to train licensable master's
level clinical mental health counselors. Theory, contextual factors, crises and trauma in
mental health settings, best practices, ethics and law, resilience and self-care.
Effective Spring Semester 2025

CEP 875  Addiction Counseling
Spring of every year. 3(3-0) P: CEP 839 and CEP 861 and HDFS 810 and CEP 874 and CEP
877 RB: Students should have an undergraduate degree with a human service-related major R:
Open to master's students in the Clinical Mental Health Counseling major.
Etiology, theories and models, classification, cultural and developmental implications for
treatment of different addiction disorders in the mental health counseling context. Evidence-
based interventions, legal, and ethical issues will be covered.
Effective Spring Semester 2025

DEPARTMENT OF KINESIOLOGY

KIN 125  First Aid and Personal Safety
Fall of every year. Spring of every year. Summer of every year. 3(3-0)
REINSTATEMENT Knowledge and application of first aid concepts relating to respiratory and cardiopulmonary
disorders, shock, wounds, burns, fractures, drug poisoning, childbirth, litigation. Preventing
trauma by recognizing and avoiding safety hazards.
SA: PES 125
Effective Fall Semester 2024
PART II – NEW COURSES

KIN 180   Philosophy of Yoga and Meditation
Fall of every year. Spring of every year. Summer of every year. 2(2-0)
Practice of self-observation and inner inquiry through the intellectual and practical study of the 8 limbs of yoga and meditation. The basic and practical philosophy of yoga.
Effective Spring Semester 2025

KIN 181   Foundations of Yoga Instruction
Fall of every year. Spring of every year. Summer of every year. 2(2-0)
Application and the physical practice of instructing yoga.
Effective Spring Semester 2025

KIN 471   Critical Appraisal for Evidence-Based Practice in Kinesiology
Fall of odd years. 3(3-0) R: Open to seniors or graduate students in the Department of Kinesiology.
Development of critical appraisal skills, focusing on research designs and statistical analyses, for evaluating randomized controlled trials and meta-analyses to be used as the basis of professional and clinical practice.
Effective Fall Semester 2024

KIN 873   Advanced Research Methods in Kinesiology: Transparency, Openness, Replication
Fall of even years. 3(3-0) R: Open to doctoral students in the Kinesiology Major.
Sources of bias and inferential errors in the research process. Questionable research practices. Bias-susceptible methodological practices in Kinesiology. Steps to improve replicability, openness, and transparency in conducting and reporting research.
Effective Fall Semester 2025

MSU COLLEGE OF LAW

LAW 535T   New Technologies and the Law
On Demand. 0 to 6 credits. R: Open to students in the MSU College of Law.
New technologies affecting lawyers and their clients and an exploration of what lawyers need to know and do to address the challenges and opportunities new technologies bring us.
Effective Spring Semester 2024

LAW 586B   Artificial Intelligence: Legal Research and Writing
On Demand. 0 to 6 credits. P: (LAW 530N or LAW 530Q or LAW 530E or LAW 530D) and LAW 530J RB: Prerequisites: Research, Writing, and Analysis & Advocacy R: Open to students in the MSU College of Law.
Use of generative artificial intelligence (AI) in legal research and writing.
Effective Fall Semester 2024

DEPARTMENT OF LINGUISTICS, LANGUAGES AND CULTURES

LLT 408   Assessment for Language Teaching and Research
Spring of every year. 3(3-0) RB: (LLT 307 or concurrently) or prior/concurrent course work on second/additional language teaching methods for any World Language R: Not open to graduate students. Not open to students with credit in LLT 808.
Measuring language proficiency for research.
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 Semester 2024
**DEPARTMENT OF MATHEMATICS**

MTH 362 Mathematics of Contract Pricing in Sports Analytics  
Fall of every year. Spring of every year. 3(3-0) P: MTH 360 RB: MTH 361  
Employ tools from mathematics finance to value sports contracts in sports analytics. Connections with utility theory and constrained optimality. Analysis of sports organizations and the leagues they play in.  
Effective Spring Semester 2025

**DEPARTMENT OF MEDIA AND INFORMATION**

MI 103 Practical Computing for Interactive Media  
Fall of every year. Spring of every year. 3(2-2) R: Open to undergraduate students in the Department of Media and Information.  
Introduction to topics in computer literacy and digital media creation. Work with modern technology ranging from smartphones to extended reality. Inner workings of today’s technology and key strategies for troubleshooting issues with hardware and software to prepare for a career in interactive media creation.  
Effective Fall Semester 2024

MI 111 Game Literacy  
Fall of every year. Spring of every year. 3(3-0) R: Open to undergraduate students in the Games and Interactive Media major.  
Effective Fall Semester 2024

MI 495 Game and Interactive Media Projects (W)  
Fall of every year. Spring of every year. 3(2-2) P: (CAS 117) and (MI 227 or MI 230 or MI 247) R: Open to undergraduate students in the Games and Interactive Media major and not open to undergraduate students in the Game Design and Development Minor.  
Experiencing game production in a team setting. Understand the production cycle (including specification, design, prototyping, implementation, testing, and documentation). Planning and manage game design, development, and production tasks. Discussing and experience professionalism, ethics, and communication. Developing presentation methods.  
Effective Fall Semester 2024

**COLLEGE OF MUSIC**

MUS 151J Voice: Jazz  
Fall of every year. Spring of every year. 1 to 2 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open to students in the College of Music.  
REINSTATEMENT Private instruction in voice.  
Effective Fall Semester 2024

**DEPARTMENT OF OSTEOPATHIC MANIPULATIVE MEDICINE**

OMM 501 Student Coordinator for Osteopathic Manipulative Medicine Practical Laboratory  
Fall of every year. Spring of every year. Summer of every year. 1(1-0) A student may earn a maximum of 8 credits in all enrollments for this course. P: OMM 511 C: OMM 500 concurrently  
Student Coordinator of didactic and clinical sessions which apply osteopathic principles and techniques on patients.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Summer Semester 2024
PART II – NEW COURSES

OMM 520 Sports Osteopathic Medicine Treatment
Fall of every year. Spring of every year. 1(1-0) A student may earn a maximum of 8 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Osteopathic Medicine. Approval of department. Opportunity to actively treat MSU Division I athletes using Osteopathic Medicine Treatment under the guidance of Osteopathic Neuromusculoskeletal Medicine residents. Request the use of the Pass-No Grade (P-N) system. Effective Fall Semester 2024

OMM 521 Student Coordinator for Sports Osteopathic Medicine Treatment
Fall of every year. Spring of every year. 1(1-0) A student may earn a maximum of 8 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Osteopathic Medicine. Approval of department. C: OMM 520 concurrently. Student coordinators will help to coordinate the clinic functions that are able to provide the other student participants with an opportunity to actively treat MSU Division I athletes using Osteopathic Medicine Treatment under the guidance of Osteopathic Neuromusculoskeletal Medicine residents. Request the use of the Pass-No Grade (P-N) system. Effective Fall Semester 2024

OMM 591 Osteopathic Manipulative Medicine Teaching Assistant Elective
Fall of every year. Spring of every year. Summer of every year. 1(1-0) A student may earn a maximum of 4 credits in all enrollments for this course. P: OMM 512 R: Open to graduate-professional students in the College of Osteopathic Medicine. Approval of department. Experience in teaching OMM diagnosis and treatment in a small group setting. Request the use of the Pass-No Grade (P-N) system. Effective Fall Semester 2024

COLLEGE OF OSTEOPATHIC MEDICINE

OST 585 Introduction to Community-Based Service
Fall of every year. 1(1-0) R: Open to graduate-professional students in the College of Osteopathic Medicine. Preparation for medically relevant service experience in local communities. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. Effective Fall Semester 2024

OST 586 Community-Based Service Learning
Spring of every year. 1(1-0) P: OST 585 or concurrently or approval of college R: Open to graduate-professional students in the College of Osteopathic Medicine. Capstone for community-based service learning. 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 Spring Semester 2025

OST 696 Global Health: Spain- Pre-Clinical Observation, Culture and Medicine
Summer of every year. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to graduate-professional students in the College of Osteopathic Medicine. Approval of department; application required. International Clinical Immersion 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 Semester 2024
DEPARTMENT OF PHYSICS AND ASTRONOMY

PHY 864   Accelerator Technology
Spring of every year. 3(3-0) RB: PHY 422 and PHY 482 R: Open to graduate students in the College of Engineering or in the College of Natural Science.
REINSTATEMENT Key technologies for modern accelerators such as magnets, the normal conducting and super conducting radio frequency cavities, charged particle sources, diagnostic instruments.
Effective Spring Semester 2024

DEPARTMENT OF PLANT, SOIL AND MICROBIAL SCIENCES

CSS 860   Soil Health Concepts and Methodology
Fall of every year. 1(0-2) RB: One course in soil science and one course in plant science or ecosystem science
Quantitative assessment of chemical, physical, and biological components of soils in agroecosystems. Advanced techniques in field and laboratory settings. Soil health data verification and validation for informed interpretations and management recommendations.
Field trip required. Offered first ten weeks of semester.
Effective Fall Semester 2024

DEPARTMENT OF PUBLIC HEALTH (CS MOTT)

PH 826   Data Management in Public Health Practice
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to students in the Public Health Major or approval of department.
Data management skills for using large data sets for public health related practice and research activities.
Effective Fall Semester 2024

PH 829   Public Health and Healthcare Delivery Data
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: PH 826 and PH 878 R: Open to students in the Public Health Major or approval of department.
Public health and healthcare data sources, data systems and use requirements. Common data sources and data sets in public health and healthcare delivery. Application of data management, project management, study design, research methods, and statistical analysis skills.
Effective Fall Semester 2024

PH 830   Foundations of Rural Public Health
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to students in the Public Health Major or approval of department.
Unique historical, political, and social influences of rural health. Rural determinants of health, public health systems, health outcomes and disparities. Comparisons of domestic and global rural health.
Effective Fall Semester 2024

PH 834   Drivers of Rural Health
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to students in the Public Health Major or approval of department.
Analysis of social, cultural, commercial, and political systems, resource availability and their interactions that can be changed to improve domestic and global health outcomes.
Effective Fall Semester 2024
PH 839  Rural Public Health Policy and Advocacy  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: PH 830 and PH 834 R: 
Open to students in the Public Health Major or approval of department. 
Leadership and advocacy skills necessary for rural public health systems and policy-level change. Leadership theories, skills, and policy development processes. Exploration of political, social, and cultural drivers/determinants that influence policy, advocacy, and coalition building in rural communities. Advocacy plan creation specific to rural public health issues. 
Effective Fall Semester 2024

DEPARTMENT OF RELIGIOUS STUDIES

GNL 820  Philanthropy and Nonprofit Organizations  
On Demand. 2(2-0)  
Historical, conceptual, and applied aspects of philanthropy and nonprofit organizations and management in civil society, as well as their implications for research and practice. 
Effective Spring Semester 2025

DEPARTMENT OF ROMANCE AND CLASSICAL STUDIES

ROM 240  Fundamentals in Translation Theory and Practice  
Fall of every year. Spring of every year. 3(3-0) RB: 300-level/3rd-year proficiency in target language (i.e. French or Spanish) R: Approval of department. 
Introduction to Translation Studies and to the different types of translation practices. 
Effective Fall Semester 2024

DEPARTMENT OF WRITING, RHETORIC, AND CULTURES

WRA 801  Introduction to Rhetoric and Writing  
Fall of every year. 3(3-0) R: Open to graduate students in the Rhetoric and Writing Major or approval of department. 
Introduction to rhetoric and writing as a discipline. Exploration of practices, scholarship, and histories related to rhetoric and writing studies. Development of priorities and goals for work in the graduate program and in the field. Review of program expectations and milestones. 
Effective Fall Semester 2024

WRA 828  Queer Rhetorics  
Fall of odd years. 3(3-0) R: Open to students in the Rhetoric and Writing Major. 
History of queer theory and its roots in LGBT and gender/women’s studies. Analysis of queer arguments and exploration of ways queer arguments/arguments about queer issues have been circulated and to what end. Examination of issues including community, kinship, literacy, resistance, and coalition to explore different facets of queer rhetoric/theory through a variety of disciplines, activist organizations/organizers, pedagogies, and pop culture. 
Effective Fall Semester 2024

WRA 842  Foundations in Experience Architecture  
Spring of even years. 3(3-0) R: Open to students in the Rhetoric and Writing Major. 
Exploration of theoretical foundations, methodologies, methods and tools, principles, and practices of user-centered design as applied to user experience. Focus on usability, findability, accessibility, and ethics in relation to information architecture, interaction design, and service design across time and space. 
Effective Fall Semester 2024

WRA 880  Theories of Rhetoric and Writing  
Spring of every year. 3(3-0) R: Open to students in the Rhetoric and Writing Major. 
Major themes and theories of rhetoric and their impact on rhetoric and writing studies, including but not limited to critical theory, composition studies, cultural rhetorics, cultural studies, digital rhetoric, experience architecture, and technical communication. 
Effective Fall Semester 2024
UGS 350 Special Topics in Global Technology I
Fall of every year. Spring of every year. Summer of every year. 3(3-0) Interdepartmental with Business. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of Tier I Writing Requirement R: Not open to freshmen. A student may earn a maximum of 12 credits UGS 350 and UGS 351.
Technical, intercultural, and professional skill development. Organizational problem-solving related to data, coding, and ecommerce.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
Effective Spring Semester 2024

UGS 351 Special Topics in Global Technology II
Fall of every year. Spring of every year. Summer of every year. 3(3-0) Interdepartmental with Business. A student may earn a maximum of 6 credits in all enrollments for this course. P: (UGS 350 or concurrently) and completion of Tier I writing requirement R: Not open to freshmen. A student may earn a maximum of 12 credits UGS 350 and UGS 351.
Advanced technical, intercultural, and professional skill development. Organizational problem-solving related to data, coding, and ecommerce.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
Effective Spring Semester 2024
PART III – COURSE CHANGES

DEPARTMENT OF ADVERTISING AND PUBLIC RELATIONS

ADV 205 Principles of Advertising Foundations of Advertising
Fall of every year. Spring of every year. Summer of every year. 3(3-0)
Principles and practices of advertising in relation to economies, societies, and mass communication. Theories, principles and practices of advertising. Account planning; research and creative processes; media channels; preparing written business communications for advertising; using typical software applications.
Effective Fall Semester 2025

ADV 225 Basic Skills for Advertising Careers
Fall of every year. Spring of every year. Summer of every year. 3(3-0)
Theory and practice of preparing written business communications for advertising and utilizing typical software applications.
DELETE COURSE
Effective Fall Semester 2025

ADV 431 Monitoring and Measuring Social Media of Brands Social Media Listening
Fall of every year. Spring of every year. 3(3-0) R: Open to students in the Department of Advertising and Public Relations or in the Department of Communication or in the Sports Business Management Minor. R: Open to undergraduate students in the Department of Advertising and Public Relations or in the Department of Communication.
Social media monitoring and analysis for businesses and brands including advanced keyword building and search techniques. Discovering business insights through social media listening and applying insights through a social media response plan.
Effective Fall Semester 2025

ADV 432 Digital Media Planning and Buying Advertising Innovations
Fall of every year. Fall of every year. Spring of every year. 3(3-0) P: ADV 205 and MKT 327 P: ADV 205 R: Open to students in the Department of Advertising and Public Relations.
Media planning and buying for web-based business applications. Budget building, media mix recommendations, performance analysis, and support for business decisions. Emerging media technologies and data analytics systems; audience selection, content delivery, channel selection, data collection, interpretation and application to persuasion.
Effective Fall Semester 2025

ADV 433 Internet Video Promotion Strategy Social Media Video Strategy
Spring of every year. 3(3-0) P: ADV 205 and MKT 327
Promotional video production focusing on brands or companies. Use of metrics and analytical tools to determine impact of promotional video. Video distribution strategies.
Effective Fall Semester 2025

ADV 445 Programmatic Media Buying Programmatic Advertising
Fall of every year. Spring of every year. 3(3-0) P: ADV 350 R: Open to students in the Department of Advertising and Public Relations.
Background, processes, and applications of how online advertising and public relations campaigns are planned, booked, optimized, and validated using programmatic tools. Developments and trends in programmatic advertising platform tests and entries into mainstream media channels. Targeted offers, messages, content or ads across paid, owned and earned channels.
Effective Fall Semester 2025
ADV 456  Interactive Advertising Strategy
Interactive Advertising
Fall of every year. Spring of every year. 3(3-0) P: ADV 330 or ADV 350 R: Open to students in the Department of Advertising and Public Relations.
Theory and practice of interactive advertising, e-commerce, Internet advertising, online sales promotion, online public relations, virtual communities, and Internet research. Role of strategy in implementing interactive solutions.
Effective Fall Semester 2025

DEPARTMENT OF COMMUNITY SUSTAINABILITY

CSUS 278  Introduction to Conservation, Recreation and Environmental Enforcement
Fall of every year. 1(1-0) Interdepartmental with Fisheries and Wildlife R: Not open to freshmen.
Scope, history and application of conservation, recreation and environmental law enforcement at the international, federal, state and local level. Integration with traditional policing, resource management and public lands. Career opportunities.
DELETE COURSE
Effective Spring Semester 2025

CSUS 431  Interpretation and Visitor Information Systems
Spring of every year. 3(2-2) P: ((CSUS 200 or CSUS 276) or approval of department) and completion of Tier I writing requirement R: Open to juniors or seniors or graduate students.
Interpretation principles and practice for nonformal settings, such as community development organizations, parks, museums, zoos, aquaria, nature and visitor centers, and historic sites. Goals and functions of interpretation for community development, visitor and tourist experience enhancement, achievement of resource and visitor management goals. Planning, implementation, and evaluation of interpretive programs for diverse audiences. Information systems and visitor services. National certification optional. Field trips required.
SA: PRR 451
DELETE COURSE
Effective Spring Semester 2025

CSUS 473  Social Entrepreneurship and Community Sustainability
Spring of every year. Spring of even years. 3(3-0) P: (CSUS 200 or CSUS 273) and completion of Tier I writing requirement RB: A course in micro-economics R: Open to juniors or seniors or graduate students.
Start-up and management of private sector, non-profit, and public organizations. Identifying and overcoming the challenges associated with the sustainable operations of small organizations.
SA: PRR 473
Effective Spring Semester 2026

DEPARTMENT OF COUNSELING, EDUCATIONAL PSYCHOLOGY, AND SPECIAL EDUCATION

CEP 811  Adapting Innovative Technologies to Education
Fall of every year. Spring of every year. Summer of every year. Fall of every year. Summer of every year. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.
Application of instructional principles and methods to educational problems in the K-12 classroom. Development of technological applications which are interactive, multisensory, and innovative.
Effective Summer Semester 2025

CEP 812  Applying Educational Technology to Issues of Practice
Fall of every year. Spring of every year. Summer of every year. Spring of every year. Summer of every year. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.
Applications of technology in K-12 settings. Identification, implementation, and evaluation of technology-based solutions to educational issues in school settings.
Effective Spring Semester 2025
CEP 813  Electronic Assessment for Teaching and Learning  
**Fall of every year, Summer of every year. 3(3-0)**  
Foundational theories of assessment. Critical examination of methods (e.g., portfolios, rubrics, surveys, tests, self-evaluations), and digital tools that allow educators to gather information, analyze it, and make informed pedagogical choices. Design of assessments for learning, as learning and of learning, especially in digital contexts. 
Effective Summer Semester 2025

CEP 815  Technology and Leadership  
**Fall of every year, Spring of every year, Summer of every year, 3(3-0) RB: CEP 810 and CEP 811 and CEP 812**  
Effective Spring Semester 2025

CEP 820  Teaching and Learning Online  
**Fall of every year, Spring of every year, Summer of every year, Spring of every year, Summer of every year. 3(3-0)**  
Strategies, frameworks, models, and theories related to online teaching and learning applied to design and implementation of online learning experiences. 
Effective Spring Semester 2025

CEP 822  Approaches to Educational Research  
**Fall of every year, Summer of every year, Fall of every year, Spring of every year, Summer of every year. 3(3-0)**  
Alternative methods of educational research. Identifying researchable problems in education and developing a research proposal. Applications of descriptive and inferential statistics for analyzing and critiquing published studies. 
Effective Spring Semester 2025

CEP 877  Assessment in Rehabilitation Assessment in Counseling  
**Fall of every year. 3(3-0) RB: CEP 870 RB: Human services master's level students R: Open to master's students in the Clinical Mental Health Counseling major.**  
Effective Fall Semester 2024

CEP 893A  Rehabilitation Counseling Internship Internship in Counseling  
**Fall of every year, Spring of every year, Summer of every year. 1 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: CEP 870 and CEP 861 and CEP 862 and CEP 874 and CEP 878 and CEP 894A P: (CEP 861 and CEP 862 and CEP 874 and CEP 878 and CEP 894A and CEP 877 and CEP 839 and CEP 859 and CEP 875) or (CEP 861 and CEP 862 and CEP 874 and CEP 878 and CEP 894A and CEP 877 and CEP 864 and CEP 873) RB: CEP 894A R: Open to master's students in the Rehabilitation Counseling Major. R: Open to master's students in the Clinical Mental Health Counseling major and Rehabilitation Counseling major.**  
Community-based rehabilitation counseling internship. Request the use of the Pass-No Grade (P-N) system. 
Effective Fall Semester 2024

CEP 894A  Rehabilitation Counseling Practicum Practicum in Counseling  
**Fall of every year. Summer of every year. 3(2-1) P: CEP 870 and CEP 861 and CEP 862 and CEP 874 and CEP 878 P: CEP 861 and CEP 862 and CEP 874 and CEP 878 R: Open to master's students in the Rehabilitation Counseling Major. R: Open to master's students in the Clinical Mental Health Counseling major and Rehabilitation Counseling major.**  
Community-based rehabilitation counseling practicum. Request the use of the Pass-No Grade (P-N) system. 
Effective Fall Semester 2024
DEPARTMENT OF ENGLISH

ENG 320D Methodologies of Literary History: History and Theory of Creative Writing  
Fall of every year. 3(3-0) P: (ENG 210 or ENG 211H) and (ENG 223 or ENG 226 or ENG 228 or ENG 229 or ENG 227) P: (ENG 210 or ENG 211H or ENG 226) and ((ENG 223 or concurrently) or (ENG 228 or concurrently) or (ENG 229 or concurrently) or (ENG 227 or concurrently)) R: Open to undergraduate students in the English Major and open to undergraduate students in the Creative Writing Minor. R: Open to undergraduate students in the Creative Writing Minor and open to undergraduate students in the English Major.  
Reflection on the theories and practices of literary history, as seen through the specific lens of creative writing.  
Effective Spring Semester 2025

ENG 493 English Internship  
Fall of every year. Spring of every year. 1 to 3 credits. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P: Completion of Tier I Writing Requirement RB: 15 credits of English. R: Open to juniors or seniors in the Department of English or in the English Major. R: Open to juniors or seniors in the Department of English.  
Supervised pre-professional field experience in English.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Fall Semester 2024

DEPARTMENT OF KINESIOLOGY

KIN 210 Principles of Exercise Physiology  
Fall of every year. Spring of every year. 3(2-2) R: Open to students in the Kinesiology major and open to students in the Health Promotion Minor and open to students in the Coaching Minor.  
Basic principles, concepts, and issues surrounding exercise physiology with a focus on cardiovascular, respiratory, musculoskeletal, and metabolic systems.  
SA: KIN 121  
Effective Fall Semester 2024

KIN 216 Applied Human Anatomy Principles of Human Anatomy  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to undergraduate students in the Athletic Training Major or in the Kinesiology major or in the Coaching Minor. R: Open to students in the Coaching Minor and open to students in the Kinesiology major.  
Structural anatomy of the human body. Interrelationships of structure, function, and human movement.  
SA: PES 216  
Effective Spring Semester 2025

KIN 217 Applied Human Anatomy Laboratory Principles of Human Anatomy Laboratory  
Fall of every year. Spring of every year. 1(0-3) P: KIN 216 or ANTR 350 R: Open to students in the Athletic Training major or in the Kinesiology major. R: Open to students in the Kinesiology major.  
Major bones, muscles, nerves, vessels, and organs of the human body. Articulations, muscle origins, muscle insertions, and prime moving actions.  
SA: PES 217  
Effective Spring Semester 2025

KIN 220 Principles of Sports Medicine  
Fall of every year. Spring of every year. 3(2-2) R: Open to students in the Kinesiology major and open to students in the Coaching Minor. Not open to students with credit in KIN 320.  
Basic principles, concepts, and issues surrounding sports medicine with a focus on trauma prevention, initial prehospital assessment and care, and professional aspects of healthcare.  
Effective Fall Semester 2024
PART III – COURSE CHANGES

KIN 240  Principles of Biobehavioral Health
Fall of every year. Spring of every year. 3(2-2) R: Open to students in the Kinesiology major and open to students in the Health Promotion Minor.
Basic principles, concepts, and issues surrounding the interaction among biological, behavioral, psychological, sociocultural, and environmental variables that influence health.
SA: KIN 173
Effective Fall Semester 2024

KIN 492  Internship: Non-Physiologically Based
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: KIN 190 and KIN 240 or approval of department R: Not open to freshmen. Approval of department.
Professional internship in kinesiology under faculty supervision. Students are involved in community and corporate internships not including physiological testing of patients/clients.
Effective Fall Semester 2024

KIN 493  Internship: Physiologically Based
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: KIN 190 and KIN 210 or approval of department RB: Completion of one of the physiologically based cognates. R: Not open to freshmen. Approval of department.
Professional internship in kinesiology under faculty supervision. Students are involved in clinical, rehabilitation, and corporate programs.
Effective Fall Semester 2024

KIN 897  Project in Kinesiology
Fall of every year. Spring of every year. Summer of every year. 1 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. R: Open only to master's students in the Department of Kinesiology.
Project experience under the guidance and supervision of MSU faculty. Development of products such as technical reports, instructional media, or curriculum materials to address an educationally significant problem. Capstone experience option in master's degree program.
Request the use of the Pass-No Grade (P-N) system.
SA: PES 897
Effective Fall Semester 2024

KIN 899  Master's Thesis Research
Fall of every year. Spring of every year. Summer of every year. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: KIN 871 R: Open to graduate students in the Department of Kinesiology.
Master's thesis research.
Request the use of the Pass-No Grade (P-N) system.
SA: PES 899
Effective Fall Semester 2024

KIN 995  Research Practicum in Kinesiology
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: Open only to doctoral students in the College of Education. Approval of department. R: Open to doctoral students in the Department of Kinesiology.
Supervised research practicum. Design, execution, analysis, presentation, critique, and revision of research projects.
Request the use of the Pass-No Grade (P-N) system.
SA: PES 995
Effective Fall Semester 2024
DEPARTMENT OF LINGUISTICS, LANGUAGES AND CULTURES

LLT 808  Assessment for Language Teaching and Research
Spring of every year. 3(3-0) RB: LLT 807 R: Open to graduate students in the Second Language Studies major or in the Teaching English to Speakers of Other Languages major or approval of department. R: Open to graduate students in the Teaching English to Speakers of Other Languages Major or approval of department. Not open to students with credit in LLT 408.
SA: ENG 808
Effective Spring Semester 2025

DEPARTMENT OF MATHEMATICS

MTH 116  College Algebra and Trigonometry
Fall of every year. Spring of every year. Summer of every year. 5(5-0) P: Designated score on Mathematics Placement test. Not open to students with credit in MTH 103. Not open to students with credit in LB 117 or MTH 103 or MTH 103B.
SA: LBS 117
Effective Fall Semester 2024

MTH 481  Discrete Mathematics I
Fall of every year. Spring of every year. Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: MTH 309
Effective Fall Semester 2024

MTH 810  Error-Correcting Codes
Spring of every year. 3(3-0) RB: MTH 411 or MTH 414 or MTH 415 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
  Block codes, maximum likelihood decoding, Shannon's theorem. Generalized Reed-Solomon codes, modification of codes, subfield codes. Alterant and Goppa codes, cyclic codes and BCH codes.
Effective Fall Semester 2024

MTH 819  Algebra II
Spring of every year. 3(3-0) RB: MTH 818 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
  Modules and vector spaces, projectives modules, tensor algebra. Fields and Galois groups, algebraic and transcendental numbers, non-commutative rings. The Jacobson radical, the structure of semisimple rings with the descending chain condition.
Effective Fall Semester 2024

MTH 828  Real Analysis I
Fall of every year. 3(3-0) RB: MTH 421 and MTH 461 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
Effective Fall Semester 2024
MTH 829  Complex Analysis I  
Spring of every year. 3(3-0) RB: MTH 421 and MTH 425 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Cauchy theorem, identity principle, Liouville's theorem, maximum modulus theorem.  
Cauchy formula, residue theorem, Rouche’s theorem. Casorati-Weierstrass theorem,  
Arzela-Ascoli theorem. Conformal mapping, Schwarz lemma, Riemann mapping theorem.  
Effective Fall Semester 2024  

MTH 841  Boundary Value Problems I  
Fall of every year. 3(3-0) RB: MTH 414 and MTH 421 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Methods for solving boundary and initial value problems for ordinary and partial differential equations.  
Effective Fall Semester 2024  

MTH 842  Boundary Value Problems II  
Spring of every year. 3(3-0) RB: MTH 841 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Continuation of MTH 841.  
Effective Fall Semester 2024  

MTH 843  Survey of Industrial Mathematics  
Fall of every year. 3(3-0) RB: ((MTH 414 or MTH 415) or Some familiarity with mathematical software such as Mathematica, Matlab, etc.) and (MTH 421 and MTH 442) RB: (MTH 414 or MTH 415) and ((MTH 421 and MTH 442) or some familiarity with mathematical software such as Mathematica, Matlab, etc.) R: Open only to master's students in the Industrial Mathematics major or approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Fundamentals of mathematical modeling in government and industry, including modes of industrial communication.  
Effective Fall Semester 2024  

MTH 844  Projects in Industrial Mathematics  
Spring of every year. 3(3-0) RB: ((MTH 414 or MTH 415) or some familiarity with mathematical software such as Mathematica or Matlab.) and (MTH 421 and MTH 442 and MTH 843) RB: (MTH 414 or MTH 415) and ((MTH 421 and MTH 442 and MTH 843) or some familiarity with mathematical software such as Mathematica or Matlab.) R: Open only to master's students in the Industrial Mathematics major or approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Participation as a member of a 3-4 person team on a significant industrial problem, with participation of an industrial liaison, including project report generation and reporting.  
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 Semester 2024  

MTH 849  Partial Differential Equations  
Spring of every year. 3(3-0) P: MTH 847 or approval of department RB: MTH 828 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Sobolev spaces and embedding theorems, weak solutions of second order elliptic equations in divergence form (existence, uniqueness, and regularity), Fredholm alternative, maximum principle, calculus of variations, Euler-Lagrange equations.  
Effective Fall Semester 2024
MTH 850   Numerical Analysis I  
Fall of every year. 3(3-0) RB: MTH 414 and MTH 421 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Convergence and error analysis of numerical methods in applied mathematics.  
Effective Fall Semester 2024

MTH 852   Numerical Methods for Ordinary Differential Equations  
Spring of every year. 3(3-0) RB: MTH 850 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Linear multi-step methods and single step nonlinear methods for initial value problems.  
Effective Fall Semester 2024

MTH 868   Geometry and Topology I  
Fall of every year. 3(3-0) RB: (MTH 411 and MTH 421) or approval of department. RB: MTH 411 and MTH 421 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Effective Fall Semester 2024

MTH 869   Geometry and Topology II  
Spring of every year. 3(3-0) RB: MTH 868 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Continuation of MTH 868.  
Effective Fall Semester 2024

MTH 880   Combinatorics I  
Fall of every year. 3(3-0) RB: MTH 411 or MTH 482 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Enumerative combinatorics, recurrence relations, generating functions, asymptotics, applications to graphs, partially ordered sets, generalized Mobius inversions, combinatorial algorithms.  
Effective Fall Semester 2024

MTH 881   Graph Theory  
Spring of even years. 3(3-0) RB: MTH 880 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Basic concepts in graph theory, connectivity, algebraic and topological methods.  
Networks, graph algorithms, Hamiltonian and Eulerian graphs, extremal graph theory, random graphs.  
Effective Fall Semester 2024

MTH 882   Combinatorics II  
Spring of every year. 3(3-0) P: MTH 880 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Algebraic combinatorics including symmetric functions, group actions, and cluster algebra, geometric combinatorics including shellability, discrete Morse functions, and polytopes.  
Extremal combinatorics including Ramsey Theory and Sperner Theory.  
Effective Fall Semester 2024
MTH 890  Readings in Mathematics
Fall of every year. Spring of every year. Summer of every year. 1 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
Individualized study for Master’s level students.
Effective Fall Semester 2024

MTH 910  Commutative Algebra
Fall of odd years. 3(3-0) RB: MTH 819 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
Noetherian rings and modules, localization and tensor products, primary decomposition, Krull dimensions, graded rings and modules, Hilbert’s Nullstellensatz, integral extensions, discrete valuation rings, Dedekind domains.
Effective Fall Semester 2024

MTH 912  Group Theory I
Fall of even years. 3(3-0) RB: MTH 819 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
Permutation groups, solvable and nilpotent groups, simple groups. Representation and character theory. Extension theory and cohomology groups.
Effective Fall Semester 2024

MTH 914  Lie Groups and Algebras
Fall of odd years. 3(3-0) RB: MTH 819 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
Nilpotent and semisimple algebras, the adjoint representation, root spaces, Weyl groups, Dynkin diagrams, classification of simple algebras.
Effective Fall Semester 2024

MTH 916  Introduction to Algebraic Geometry I
Fall of even years. 3(3-0) RB: MTH 818 and MTH 819 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
Affine and projective algebraic varieties and their properties. Morphisms and singularities. Schemes and coherent sheaves. Sheaf cohomology and other related topics.
Effective Fall Semester 2024

MTH 917  Introduction to Algebraic Geometry II
Spring of odd years. 3(3-0) RB: MTH 916 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
Continuation of MTH 916.
Effective Fall Semester 2024

MTH 918  Number Theory I
Fall of even years. 3(3-0) P: MTH 819 or approval of department R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.
Number fields and algebraic integers, prime ideals and factorization, cyclotomic fields, the class group, the Dirichlet unit theorem, different, discriminant, decomposition and inertia groups, local fields.
Effective Fall Semester 2024
PART III – COURSE CHANGES

MTH 919   Number Theory II  
Spring of odd years. 3(3-0) P: MTH 918 or approval of department  R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Topics from: class field theory, zeta and L-functions, modular forms, theory of elliptic curves, diophantine approximation, diophantine geometry.  
Effective Fall Semester 2024

MTH 920   Functional Analysis  
Spring of every year. 3(3-0) RB: MTH 828 R: Open to graduate students in the College of Natural Science or approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Effective Fall Semester 2024

MTH 921   Operator Theory  
Fall of even years. 3(3-0) RB: MTH 829 and MTH 920 R: Open to doctoral students in the College of Natural Science or approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Introduction to operator and spectral theory. Topics include Banach algebras, bounded and unbounded operators on Banach spaces, spectral theory for normal operators on a Hilbert space, C*-algebras, Schatten - von Neumann classes, the theory of Fredholm operators, semigroup theory.  
Effective Fall Semester 2024

MTH 922   Harmonic Analysis  
Fall of odd years. 3(3-0) RB: MTH 829 and MTH 920 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Fourier series, mean and pointwise convergence, conjugate functions, Fourier transform, Plancherel theorem, Paley-Wiener theorem, interpolation of operators, Hausdorff-Young theorem.  
Effective Fall Semester 2024

MTH 925   Random Variables and Stochastic Processes  
Fall of every year. 3(3-0) R: Open to doctoral students in the College of Natural Science or approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Introduction to measure-theoretic probability theory. Topics include infinite product spaces, Kolomogorov extension theorem, Borel Cantelli Lemma, law of large numbers, central limit theorem, conditioning, filtrations, martingales, Markov chains, Wiener process. 
Effective Fall Semester 2024

MTH 928   Real Analysis II  
Spring of odd years. 3(3-0) RB: MTH 828 R: Open to doctoral students in the College of Natural Science or approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Continuation of MTH 828. Topics include Borel measures on locally compact spaces, complex measures, differentiable transformations and changes of variables in Rn. 
Effective Fall Semester 2024
MTH 930  Riemannian Geometry I  
Fall of even years. 3(3-0) RB: MTH 869 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Riemannian metrics, connections, curvature, geodesics. First and second variation, Jacobi fields, conjugate points. Rauch comparison theorems, Hodge theorem, Bochner technique, spinors. Further topics on curvature or submanifold theory. 
Effective Fall Semester 2024

MTH 931  Riemannian Geometry II  
Spring of odd years. 3(3-0) RB: MTH 930 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Continuation of MTH 930. 
Effective Fall Semester 2024

MTH 935  Complex Manifolds I  
Spring of even years. 3(3-0) RB: MTH 829 and MTH 869 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Kaehler metrics, Kodaira vanishing theorem, Chern classes. 
Effective Fall Semester 2024

MTH 940  Topics in Partial Differential Equations for Applied Math  
Fall of odd years. 3(3-0) RB: MTH 828 R: Open to doctoral students in the College of Natural Science or approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Partial differential equation techniques for applied mathematics, including, bifurcation theory, partial differential equations as dynamical systems, boundary layers, asymptotic analysis, matched asymptotic and singular perturbations, and homogenization. 
Effective Fall Semester 2024

MTH 941  Linear and Nonlinear Parabolic Equations  
Spring of even years. 3(3-0) RB: MTH 940 R: Open to doctoral students in the College of Natural Science or approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Evolution equations with a comparison principle, including parabolic equations and Hamilton-Jacobi-Bellman equations, with an emphasis on existence and uniqueness of both classical and weak solutions. Linear and nonlinear cases, including quasi-linear parabolic equations related to geometric flows. 
Effective Fall Semester 2024

MTH 942  Regularity for Second Order Elliptic Equations  
Fall of even years. 3(3-0) RB: MTH 848 and MTH 849 R: Open to doctoral students in the College of Natural Science or approval of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department. 
Review of classical regularity results, such as Schauder theory and L-p theory. Elliptic equations with coefficients of low regularity (bounded and measurable) and nonlinear elliptic equations. The Harnack inequality and Holder regularity in the context of both weak solutions of divergence form equations and viscosity solutions of equations in non-divergence form. Higher regularity and applications to minimization problems. 
Effective Fall Semester 2024
PART III – COURSE CHANGES

MTH 943   Hyperbolic and Dispersive Equations  
Spring of odd years. 3(3-0) RB: MTH 942 R: Open to doctoral students in the College of Natural Science, of department. R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Classical and modern techniques for higher dimensional hyperbolic and dispersive partial differential equations. Space-time integral estimates, including the classical Strichartz estimate for Schrodinger, Klein-Gordon, and Wave equations, and modern (multi)linear estimates using Fourier, physical-space, and microlocal techniques.  
Effective Fall Semester 2024

MTH 950   Numerical Methods for Partial Differential Equations I  
Spring of odd years. 3(3-0) RB: MTH 852 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Finite difference methods for ordinary and partial differential equations.  
Effective Fall Semester 2024

MTH 951   Numerical Methods for Partial Differential Equations II  
Spring of even years. Fall of every year. Spring of every year. 3(3-0) R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Finite element methods for ordinary and partial differential equations.  
Effective Fall Semester 2024

MTH 960   Algebraic Topology I  
Fall of every year. 3(3-0) RB: MTH 869 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Cohomology, products, duality, basic homotopy theory, bundles, obstruction theory, spectral sequences, characteristic classes, and other related topics.  
Effective Fall Semester 2024

MTH 961   Algebraic Topology II  
Spring of every year. 3(3-0) RB: MTH 960 R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Continuation of MTH 960.  
Effective Fall Semester 2024

MTH 988   Representation Theory I  
Fall of odd years. 3(3-0) P: MTH 819 or approval of department R: Open to graduate students in the Applied Mathematics Major or in the Industrial Mathematics Major or in the Mathematics Major or approval of department.  
Representations of finite groups, unitary representations, tensor products and character tables, further theory (Frobenius-Schur indicator, Burnside's theorem, Mackey formula, Frobenius reciprocity), representations of GL(2; Fq), representations of symmetric groups (Young diagrams, Schur-Weyl duality), fundamental theorem of invariant theory, introduction to representations of compact groups  
Effective Fall Semester 2024

MTH 990   Reading in Mathematics  
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Approval of department. R: Open to doctoral students in the Mathematics Major or approval of department.  
Individualized study for doctoral level students.  
Effective Fall Semester 2024
MTH 991  Special Topics in Algebra
Fall of every year. Spring of every year. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. R: Approval of department. R: Open to doctoral students in the Mathematics Major or approval of department.
Advanced topics in algebra.
Effective Fall Semester 2024

MTH 992  Special Topics in Analysis
Fall of every year. Spring of every year. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. R: Approval of department. R: Open to doctoral students in the Mathematics Major or approval of department.
Advanced topics in analysis.
Effective Fall Semester 2024

MTH 993  Special Topics in Geometry
Fall of every year. Spring of every year. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. R: Approval of department. R: Open to doctoral students in the Mathematics Major or approval of department.
Advanced topics in geometry.
Effective Fall Semester 2024

MTH 994  Special Topics in Applied Mathematics
Fall of every year. Spring of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. R: Approval of department. R: Open to doctoral students in the Mathematics Major or approval of department.
Advanced topics in applied mathematics.
Effective Fall Semester 2024

MTH 996  Special Topics in Topology
Fall of every year. Spring of every year. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. R: Approval of department. R: Open to doctoral students in the Mathematics Major or approval of department.
Advanced topics in topology.
Effective Fall Semester 2024

MTH 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Approval of department. R: Open to doctoral students in the Applied Mathematics Major or in the Mathematics Major. Approval of department.
Doctoral dissertation research.
Request the use of the Pass-No Grade (P-N) system.
Effective Fall Semester 2024
DEPARTMENT OF MEDIA AND INFORMATION

MI 247 Three-Dimensional Graphics and Design
Fall of every year. Spring of every year. Summer of every year. 3(2-2) P: (CAS 116) or (STA 110 and STA 113) or (CAS 205 or CAS 206 or CAS 207) R: Open to students in the Department of Media and Information or in the Game Design and Development Minor or in the Computer Science Major or in the Graphic Design Major or in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major. R: Open to students in the Department of Media and Information or in the Computer Science Major or in the Game Design and Development Minor or in the Graphic Design Major or in the Bachelor of Fine Arts in Studio Art or in the Studio Art Major.
- Principles of 3D computer graphics applied in cinema, games, illustration, design and sculpture. Use of 3D software to create and manipulate synthetic objects, materials, lights, and cameras.
- SA: TC 247
- Effective Fall Semester 2024

MI 330 Game Level Design
Fall of every year. Spring of every year. 3(2-2) P: MI 230 RB: MI 231 or MI 247 R: Open to undergraduate students in the Department of Media and Information.
- Exploration of concepts in the planning, implementation, and testing of spaces and environments for games and interactive media.
- Effective Fall Semester 2024

MI 472 Digital Business and Commerce
Spring of every year. 3(3-0) P: (MI 349 or MI 361) and completion of Tier I writing requirement P: Completion of Tier I Writing Requirement R: Open to juniors or seniors or graduate students in the Department of Media and Information. R: Open to juniors or seniors or graduate students in the Department of Media and Information or in the Entrepreneurship and Innovation Minor.
- Technologies, business models, and organizational and social implications of electronic commerce. Strategies for designing, managing and marketing in digital commerce contexts.
- SA: TC 462C, TC 472
- Effective Fall Semester 2024

COLLEGE OF MUSIC

MUS 463 Methods and Materials of Elementary Music Music in Early Childhood
Fall of every year. Spring of every year. 3(3-0) RB: Upper-level undergraduate students in in B-K teacher certification programs; Students in PK-3 teacher certification programs; students in family studies and related programs. R: Not open to students in the College of Music.
- How children learn music from early childhood to grade three. Rationale, pedagogy, strategies and skills for integrating music and movement in care and education settings serving children ages birth-8 years old (3rd grade).
- Effective Spring Semester 2025

COLLEGE OF NURSING

NUR 861 Curriculum Design in Nursing Education
Summer of every year. Fall of every year. 3(3-0) P: NUR 802 RB: Open only to master’s students in Clinical Nurse Specialist-Nurse Education concentration. R: Open to graduate students in the Master of Science in Nursing.
- Analysis and application of theories, principles, and concepts associated with curriculum development, design, and evaluation.
- Effective Spring Semester 2024
NUR 866  Academic and Clinical Teaching Internship  
Spring of every year. Summer of every year. 3(1-6) P: NUR 861 RB: Open only to masters students in Clinical Nurse Specialist-Nurse Education concentration. R: Open to graduate students in the Master of Science in Nursing. 
Guided field internship within an academic or health care setting. Synthesis and application of concepts to facilitate development of the advanced practice nurse as scholar, teacher, and collaborator. 
Effective Spring Semester 2024

NUR 903  Healthcare Informatics  
Fall of every year. Spring of every year. 3(3-0) R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major. 
Health information systems and technologies in relationship to the delivery of efficient, high quality healthcare. 
Effective Spring Semester 2024

NUR 914  Biostatistics for the APRN  
Fall of every year. Spring of every year. Fall of every year. 3(3-0) 
The application of descriptive statistics, bivariable and multivariable inferential statistics (parametric and non-parametric), and essential epidemiological concepts 
Effective Spring Semester 2024

DEPARTMENT OF ORTHOPEDICS

OSS 644  Sports Medicine Clerkship  
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. 
Sports Medicine management and treatment. Proficiency in motor skills, aptitude, comprehension of concepts and principles, patient evaluations, diagnosis, management, therapy. 
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 4 semesters after the end of the semester of enrollment. 
SA: OSS 644 
Effective Fall Semester 2024

OSS 656  Orthopedic Clerkship  
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: Completion of Units I and II. R: Open only to graduate-professional students in the College of Osteopathic Medicine. R: Open to graduate-professional students in the College of Osteopathic Medicine. 
Program developed to achieve proficiency in motor skills, aptitudes, comprehension of concepts and principles, patient evaluation, diagnosis, management, and therapy. 
Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 4 semesters after the end of the semester of enrollment. Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. 
SA: OM 656 SA: OM 656, OSS 656 
Effective Fall Semester 2024
DEPARTMENT OF OSTEOPATHIC MANIPULATIVE MEDICINE

OMM 590 Special Problems in Biomechanics
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 48 credits in all enrollments for this course. R: Open only to graduate and graduate-professional students in the College of Osteopathic Medicine. Approval of department. R: Open to graduate-professional students in the College of Osteopathic Medicine. Approval of department.
Each student works under faculty direction on an experimental, theoretical, or applied problem.
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.
SA: BIM 590
Effective Fall Semester 2024

COLLEGE OF OSTEOPATHIC MEDICINE

OST 601 Transitions II: Classroom to Bedside Transitions: Classroom to Bedside
Summer of every year. 5 credits. A student may earn a maximum of 10 credits in all enrollments for this course. 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 Semester 2024

DEPARTMENT OF PHYSICS AND ASTRONOMY

PHY 183 Physics for Scientists and Engineers I
Fall of every year. Spring of every year. 4(5-0) P: (MTH 132 or concurrently) or (MTH 152H or concurrently) or (LB 118 or concurrently) Not open to students with credit in LB 273 or PHY 193H or PHY 231 or PHY 231C or PHY 233B. Not open to students with credit in LB 273 or PHY 193H or PHY 231 or PHY 231C or PHY 183B or PHY 233B.
Mechanics, Newton's laws, momentum, energy conservation laws, rotational motion, oscillation, gravity, and waves.
Effective Fall Semester 2024

PHY 232 Introductory Physics II
Fall of every year. Spring of every year. 3(4-0) P: PHY 231 or PHY 231C or PHY 183 or PHY 183B or PHY 193H or LB 273 P: PHY 231 or PHY 231C or PHY 183 or PHY 183B or PHY 193H or PHY 221 or LB 273 Not open to students with credit in LB 274 or PHY 184 or PHY 184B or PHY 232C or PHY 234B. Not open to students with credit in LB 274 or PHY 184 or PHY 184B or PHY 232C or PHY 294H or PHY 222 or PHY 234B.
Electricity and magnetism; optics; atomic, nuclear, and subnuclear physics.
Effective Fall Semester 2024

PHY 234B Calculus Concepts in Physics II
Spring of every year. Summer of every year. 2 credits. P: (PHY 232 or PHY 232C) and ((MTH 133 or concurrently) or (MTH 153H or concurrently) or (LB 119 or concurrently)). Not open to students with credit in LB 274 or PHY 184 or PHY 184B. Not open to students with credit in LB 274 or PHY 184 or PHY 184B or PHY 234H.
Electricity and magnetism. This course is given in the competency based instruction format.
Effective Fall Semester 2024
PHY 480  Computational Physics  
Spring of every year. 3(3-0) P: CMSE 201  RB: CSE 131 or CSE 230  
Applications of scientific computational techniques to solutions of differential equations, matrix methods, and Monte Carlo methods used in physics.  
Effective Fall Semester 2024

DEPARTMENT OF TEACHER EDUCATION

TE 202  Engaging Elementary Learners with Mathematics  
Fall of every year. Spring of every year. Summer of every year. Fall of every year. Spring of every year. 3(3-1) 3(3-0) P: MTH 204 P: TE 103  
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 Semester 2024

TE 204  Engaging Elementary Learners in Science: Culture and Equity  
Fall of every year. Spring of every year. Summer of every year. Fall of every year. 3(3-1) 3(3-0) P: TE 101  RB: Completion of an ISB and ISB laboratory or ISP and ISP laboratory course.  
Effective Fall Semester 2024

TE 301A  Children’s Literacy Development PK-3 (W)  
Fall of every year. Spring of every year. Summer of every year. Fall of every year. 3(3-1) 3(3-0) P: (TE 102) and completion of Tier I writing requirement P: (TE 101) and completion of Tier I writing requirement R: Open to students in the Elementary Teacher Certification Program (Admitted).  
Children’s development in motivation and engagement, phonological awareness, phonics, spelling, word recognition, morphology, syntax, reading fluency, handwriting, comprehension, composition, and speaking and listening. Formative assessment tools in and out of school.  
Effective Fall Semester 2024

TE 301B  Children’s Literacy Development 3-6 (W)  
Fall of every year. Spring of every year. Summer of every year. Fall of every year. 3(3-1) 3(3-0) P: (TE 102) and completion of Tier I writing requirement P: (TE 101) and completion of Tier I writing requirement R: Open to students in the Elementary Teacher Certification Program (Admitted).  
Open to students in the Special Education-Learning Disabilities Major or in the Elementary Teacher Certification Program (Admitted).  
Children’s development in motivation and engagement, phonological awareness, phonics, spelling, word recognition, morphology, syntax, reading fluency, handwriting, comprehension, composition, and speaking and listening. Formative assessment tools in and out of school.  
Effective Fall Semester 2024

TE 330  Science Curriculum for Young Learners (PK-3)  
Fall of every year. Spring of every year. Summer of every year. Spring of every year. 3(3-2) 3(3-0) P: TE 101 RB: Completion of an ISB and ISB laboratory or ISP and ISP laboratory course.  
Open to students in the Elementary Teacher Certification Program (Admitted). R: Open to students in the Special Education-Learning Disabilities Major or in the Elementary Teacher Certification Program (Admitted).  
Science curriculum standards for grades PK-3. Instructional materials and approaches for supporting science learning.  
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 Semester 2024
TE 331   Social Studies for Young Learners (PK-3)  
Fall of every year. Spring of every year. Summer of every year. Fall of every year. 3(3-2) 3(3-0) P: TE 101  R: Open to students in the Elementary Teacher Certification Program (Admitted). R: Open to students in the Special Education-Learning Disabilities Major or in the Elementary Teacher Certification Program (Admitted).  
History, geography, civics and government, economics, public discourse, decision-making, and citizen involvement; emphasizing PK-3 social studies content, including Michigan, United States, and Global Studies.  
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 Semester 2024

TE 332   Science Curriculum for Upper Elementary Learners (3-6)  
Fall of every year. Spring of every year. Summer of every year. Spring of every year. 3(3-2) 3(3-0) P: TE 204 RB: Completion of ISB, ISP and ISB/ISP laboratory courses R: Open to students in the Elementary Teacher Certification Program (Admitted). R: Open to students in the Special Education-Learning Disabilities Major or in the Elementary Teacher Certification Program (Admitted).  
Science curriculum standards for grades 3-6. Instructional materials and approaches for supporting science learning.  
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 Semester 2024

TE 333   Social Studies for Upper Elementary Learners (3-6)  
Fall of every year. Spring of every year. Summer of every year. Fall of every year. 3(3-2) 3(3-0) P: TE 101  R: Open to students in the Elementary Teacher Certification Program (Admitted). R: Open to students in the Special Education-Learning Disabilities Major or in the Elementary Teacher Certification Program (Admitted).  
History, geography, civics and government, economics, public discourse, decision-making, and citizen involvement; emphasizing 3-6 social studies content, including Michigan, United States, and Global Studies.  
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 Semester 2024

TE 340   Teaching and Learning of Elementary Science (PK-6)  
Fall of every year. Spring of every year. Summer of every year. Spring of every year. 3(3-1) 3(3-0) P: TE 330 or TE 332 RB: Completion of an ISP or ISB course or ISP or ISP laboratory course  
Engaging diverse learners in grades PK-6 to make sense of the natural world. Lesson planning. Designing and using formative assessment and discourse strategies to learn about children’s ideas and resources for learning science. Supporting children’s sense-making about phenomena through engagement in scientific practices and using disciplinary ideas.  
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 Semester 2024

TE 341   Teaching and Learning of (Bi)Multilingual Learners  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (TE 101) and completion of Tier I writing requirement  
Social and psychological language theoretical perspectives, principles, and fundamental approaches for the teaching and learning of (bi)multilingual learners. Historical background, current policies, sociocultural dimensions, and classroom implications of (bi)multilingualism.  
Effective Fall Semester 2024
TE 342  Teaching Methods for (Bi)multilingual Learners
Fall of every year. Spring of every year. Summer of every year. 3(3-1) 3(3-0) P: (TE 341 and LLT 307) and completion of Tier I writing requirement P: (TE 341) and completion of Tier I writing requirement RB: Documented experience learning a second language equivalent to two semesters’ worth of college-level study in order to gain an understanding and appreciation of the processes of learning an additional language. R: Open to students in the Teaching English to Speakers of Other Languages Disciplinary Teaching Minor. R: Open to students.
Pedagogical principles based on research of language development in bi/multilingual students in the K-12 system. Methods of standards-based curricular and instructional design. Issues of assessment for (bi)multilingual learners.
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 Semester 2024

TE 343  Teaching and Learning of Elementary Social Studies (PK-6)
Fall of every year. Spring of every year. Summer of every year. Fall of every year. 3(3-1) 3(3-0) P: TE 331 or TE 333
Equitable social studies instruction in grades pK-6. Lesson planning, assessment, teaching, and learning in grades PK-6 social studies.
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 Semester 2024

TE 348  Reading and Responding to Children's Literature
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: Completion of Tier I Writing Requirement
Literary understanding and genres in reading and teaching children's literature. Critical and theoretical perspectives in evaluating children's literature. Children's responses to literature. Literary, social, and pedagogical issues in the study of children's literature.
Effective Fall Semester 2024

TE 403A  Teaching of Science to Diverse Learners PK-3
Fall of every year. Spring of every year. Fall of every year. 3(3-2) 3(3-0) P: TE 330
Engaging diverse learners in grades PK-3 to make sense of the natural world. Lesson planning. Designing and using formative assessment and discourse strategies to learn about children’s ideas and resources for learning science. Supporting children’s sense-making about phenomena through engagement in scientific practices and using disciplinary ideas.
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 Semester 2024

TE 403B  Teaching of Science to Diverse Learners 3-6
Fall of every year. Spring of every year. Fall of every year. 3(3-2) 3(3-0) P: TE 332
Engaging diverse learners in grades 3-6 to make sense of the natural world. Lesson planning. Designing and using formative assessment and discourse strategies to learn about children’s ideas and resources for learning science. Supporting children’s sense-making about phenomena through engagement in scientific practices and using disciplinary ideas.
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 Semester 2024
PART III – COURSE CHANGES

TE 404A   Teaching of Social Studies to Diverse Learners PK-3 (W)
Fall of every year. Spring of every year. Spring of every year. 3(3-2) 3(3-0) P: (TE 331) and completion of Tier I writing requirement
Teaching social studies to diverse learners at the elementary level (PK-3). Inquiry into and construction of subject-specific meaning. Social studies subject matter adapted to learner diversity. Teachers’ roles, including professional, intellectual, and sociopolitical responsibilities.
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 Semester 2024

TE 404B   Teaching of Social Studies to Diverse Learners 3-6 (W)
Fall of every year. Spring of every year. Spring of every year. 3(3-2) 3(3-0) P: (TE 333) and completion of Tier I writing requirement
Teaching social studies to diverse learners at the elementary level (3-6). Inquiry into and construction of subject-specific meaning. Social studies subject matter adapted to learner diversity. Teachers’ roles, including professional, intellectual, and sociopolitical responsibilities.
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 Semester 2024

TE 405   Teaching Literacy to Diverse Learners I (3-6)
Fall of every year. Spring of every year. Fall of every year. 3(3-2) 3(3-0) P: TE 301B P: (TE 202 or MTH 202) and (TE 301 or TE 301B)
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 Semester 2024

TE 405A   Teaching Literacy to Diverse Learners (PK-3)
Fall of every year. Spring of every year. Fall of every year. 3(3-2) 3(3-0) P: TE 301A P: (MTH 202 or TE 202) and (TE 301 or TE 301A) R: Open to students in the Elementary Teacher Certification Program (Admitted).
Teaching language and literacy to diverse learners in early elementary Literacy learning environments. Literacy curriculum design and assessment. Culturally responsive practices in literacy. Teaching motivation and engagement, print concepts, phonological awareness, phonics, spelling, word recognition, morphology, syntax, vocabulary, handwriting, comprehension, composition, speaking and listening in early elementary classrooms.
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 Semester 2024
TE 405B  Teaching Literacy to Diverse Learners II (PK-3)
Fall of every year, Spring of every year. Spring of every year. Spring of every year. 3(3-2) 3(3-0) P: TE 405A R: Open to students in the Elementary Teacher Certification Program (Admitted).
Teaching language and literacy to diverse learners in the early elementary grades.
Literacy learning environments. Literacy curriculum design and assessment. Culturally responsive practices in literacy. Teaching motivation and engagement, phonics, spelling, word recognition, morphology, syntax, reading fluency, vocabulary, handwriting, comprehension, composition, speaking and listening in early elementary grades classrooms.
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 Semester 2024

TE 405C  Teaching Literacy to Diverse Learners II (3-6)
Fall of every year, Spring of every year. Spring of every year. Spring of every year. 3(3-2) 3(3-0) P: TE 405
Equitable literacy instruction in grades 3-6. Lesson planning, assessment, teaching, and learning in 3-6 literacy.
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 Semester 2024

TE 406  Teaching Mathematics to Diverse Learners I (3-6)
Fall of every year, Spring of every year. Spring of every year. Spring of every year. 3(3-2) 3(3-0) P: TE 202 P: (MTH 202 or TE 202) and TE 405
Building mathematical relationships with diverse learners in Grades 3-6. Choosing representations, eliciting children's thinking, and implementing tasks to develop children's understanding of whole numbers and operations and fractions, decimals, and operations. Teacher's roles, including professional, intellectual, and sociopolitical responsibilities.
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 Semester 2024

TE 406A  Teaching Mathematics to Diverse Learners I (PK3)
Fall of every year, Spring of every year. Spring of every year. Spring of every year. 3(3-2) 3(3-0) P: TE 202 P: (MTH 202 or TE 202) and TE 405A R: Open to students in the Elementary Teacher Certification Program (Admitted).
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 Semester 2024

TE 406B  Teaching Mathematics to Diverse Learners II (PK-3)
Fall of every year, Spring of every year, Fall of every year. Spring of every year. 3(3-2) 3(3-0) P: TE 406A R: Open to students in the Elementary Teacher Certification Program (Admitted), R: Open to students.
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 Semester 2024
TE 406C  Teaching Mathematics to Diverse Learners II (3-6)  
Fall of every year. Spring of every year. Fall of every year. 3(3-2) 3(3-0) P: TE 406  
Equitable mathematics instruction in grades 3-6. Lesson planning, assessment, teaching, and learning in grades 3-6 mathematics.  
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 Semester 2024

TE 471  Justice and Equity Seminar III  
Fall of every year. Spring of every year. Summer of every year. Fall of every year. Spring of every year. 1(1-0) P: TE 102 R: Open to students in the Elementary Teacher Certification Program (Admitted).  
Application of equity and justice principles in co-occurring course- and/or field-based work.  
Effective Fall Semester 2024

TE 472  Justice and Equity Seminar IV  
Fall of every year. Spring of every year. Summer of every year. Fall of every year. Spring of every year. 1(1-0) P: TE 102 R: Open to students in the Elementary Teacher Certification Program (Admitted).  
Application of equity and justice principles in co-occurring course- and/or field-based work.  
Effective Fall Semester 2024

TE 482  PK-3 Internship II  
Spring of every year. 3 to 6 credits. 6(6-0) R: Open to students in the Elementary Teacher Certification Program (Admitted). C: TE 404A concurrently and TE 405B concurrently  
Directed and evaluated internship in PK3 classrooms. Teaching content to students with varied learning needs. Theoretical and field-based explorations of common teaching dilemmas.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Fall Semester 2024

TE 484  3-6 Internship I  
Fall of every year. 3 to 6 credits. 3(3-0) R: Open to students in the Elementary Teacher Certification Program (Admitted). C: TE 406C concurrently and TE 403B concurrently  
Directed and evaluated internship in 3-6 classrooms. Teaching content to students with varied learning needs. Theoretical and field-based explorations of common teaching dilemmas.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Fall Semester 2024

DEPARTMENT OF THEATRE

THR 315  Drafting for Theatre  
Spring of every year. 3(2-2) A student may earn a maximum of 6 credits in all enrollments for this course. P: THR 211 RB: THR 111  
Methods and development of techniques used in theatrical drafting. Introduction to the principles of hand and CAD drafting for theatre including terminology, best practices and fundamentals, scale and dimension drawings, sections, ground plans, auxiliary views and reproduction processes.  
Effective Fall Semester 2024
DEPARTMENT OF WRITING, RHETORIC, AND CULTURES

WRA 810 Writing, Composing, Designing, Making
Fall of every year. 3 credits. R: Open to graduate-professional students in the Department of Writing, Rhetoric and American Cultures. R: Open to students in the Rhetoric and Writing Major. Practices of writing, composing, designing, and making primarily digital texts. Practice informed by current topics in and theories of professional and technical writing, cultural rhetorics, including critical making and multimodal composing. Effective Fall Semester 2024

WRA 870 Research Methodologies in Rhetoric and Writing
Spring of every year. 3(3-0) R: Open to doctoral students in the Rhetoric and Writing major and open to master's students in the Critical Studies in Literacy and Pedagogy major and open to master's students in the Digital Rhetoric and Professional Writing major. R: Open to students in the Rhetoric and Writing Major. Exploration of inquiry approaches in rhetoric and writing. Discussion of methodologies, theoretical foundations, methods and tools, and project design. Exploration of inquiry approaches in rhetoric and writing and its subdisciplines. Discussion of research methodologies, theoretical foundations, methods and tools, ethical issues related to conducting research, researcher positionality, and project design practices. SA: AL 870 Effective Fall Semester 2024

WRA 882 Contemporary Theories of Rhetoric
Spring of every year. 3(3-0) R: Open to graduate students or master's students or doctoral students in the Department of English or in the Professional Writing Major or in the Rhetoric and Writing Major. Modern, postmodern, and contemporary rhetoric theories and their impact on writing and writing instruction. Cultural studies, critical theory, feminist discourse theory, rhetorical ethics, visual rhetoric, digital and media theory. SA: AL 882 DELETE COURSE Effective Fall Semester 2024

WRA 885 Research Colloquium
Fall of every year. 3(3-0) R: Open to doctoral students in the Rhetoric and Writing major. Professional development seminar focused on developing research skills, designing research projects, and preparing and conference presentations. SA: AL 885 DELETE COURSE Effective Fall Semester 2024

WRA 886 Master's Research Colloquium
Fall of every year. 3(3-0) R: Open to master's students in the Department of Writing, Rhetoric and American Cultures. Approval of department. Professional development seminar focused on developing research skills, designing research projects, and preparing publications, conference presentations, and other professional materials unique to master's students. DELETE COURSE Effective Fall Semester 2024