MICHIGAN STATE UNIVERSITY

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.

MICHIGAN STATE UNIVERSITY
University Committee on Curriculum

April 25, 2024

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:[1]

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

PART III - COURSE CHANGES:[1]

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

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

[1]One 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):

HB	265	Hospitality Food Service Systems I	3
HB	347	Hospitality Supply Chain Process	3
HB	358	Hospitality Entrepreneurship	3
HB	365	Hospitality Foodservice Systems II	3
HB	409	Introduction to Wine	3
HB	411	Hospitality Beverages	3

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

HB	100	Introduction to Hospitality Business	2
HB	267	Management of Food and Beverage Systems	3

Add the following courses:

HB	100	Introduction to Hospitality Business	3
HB	347	Hospitality Supply Chain Process	3
HB	358	Hospitality Entrepreneurship	3
HB	365	Hospitality Foodservice Systems II	3
HB	411	Hospitality Beverages	3

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

(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:

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 '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 world-wide 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.

				CREDITS
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

			CREDITS
Students must complete 28 credits from the following:			
1. All of the following courses (21 credits):			
FRN	310	Stepping into the 20th Century and Beyond	3
FRN	320	Exploring Diversity and Minorities in the Francosphere	3
FRN	330	Progressing in French Pronunciation	3
FRN	340	Connecting with the Literatures of the Francosphere (W)	3
FRN	350	Connecting with the Cultures of the Francosphere (W)	3
Two electives at the 400-level approved by the student's academic advisor			6

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

1. All of the following courses (21 credits):

			CREDITS
SPN	310	Basic Spanish Grammar	3
SPN	320	Cultural Readings and Composition (W)	3
SPN	330	Phonetics and Pronunciation	3
SPN	342	Media and Conversation	3
SPN	350	Introduction to Reading Hispanic Literature (W)	3
Two electives at the 400-level as approved by the student’s academic advisor			6

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

				CREDITS
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

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.
6. Pass a final oral examination in defense of the dissertation.

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

				CREDITS
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:

ADV	225	Basic Skills for Advertising Careers	3
CAS	110	Creative Thinking	3
PR	225	Writing for Public Relations	3

Add the following courses:

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:

ADV	432	Digital Media Planning and Buying	3

Add the following courses:

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

(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:

CEP	240	Diverse Learners in Multicultural Perspective	3
TE	101	Social Foundations of Justice and Equity in Education	3
TE	102	Pedagogy and Politics of Justice and Equity in Education	3

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:

				CREDITS
1.	***Counseling Core***. All of the following courses (15 credits):			
	CEP	861	Counseling Theories	3
	CEP	862	Individual Counseling and Helping Relationships	3
	CEP	864	Career Development	3
	CEP	874	Counseling Ethics	3
	CEP	878	Counseling and Group Work	3
2.	***Clinical Mental Health Counseling Core***.			
	All of the following courses (12 credits):			
	CEP	839	Foundations of Clinical Mental Health Counseling	3
	CEP	849	Diagnosis and Psychopathology	3
	CEP	859	Crisis and Trauma Counseling	3
	CEP	875	Addiction Counseling	3

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:

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			
(c)	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.

COLLEGE OF ENGINEERING

1. 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 in1960. 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:

				CREDITS
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:

CSE	843	Language and Interaction	3
CSE	872	Advanced Computer Graphics	3

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:

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:

CSE	843	Language and Interaction	3
CSE	872	Advanced Computer Graphics	3

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 heath 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

	(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
	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

(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
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 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

(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
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 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.

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

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):

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

(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

(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:

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
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.

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.
      2. Pass an oral defense of the thesis.

      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

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

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.
Classroom diagnostic and achievement assessment for second, additional, heritage, and multi-language learning. Reliability and validity of language tests. Alternative assessment methods. Standardized and performance-based testing. Program-level assessment. 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.
Exploring games past and present. Experiencing games from a professional perspective (rather than as consumer). Developing experience with games as a medium. Origins of major inflection points in gaming. Hands-on engagement with gaming as a medium of artistic expression.
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

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

OFFICE OF THE PROVOST

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.~~ 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.~~ Summer of every year. 3(3-0) ~~RB: CEP 810 and CEP 811 and CEP 812~~ RB: (CEP 810 and CEP 811 and CEP 812) and CEP 810 and CEP 811 and CEP 812
Professional development strategies. Project management, planning and evaluation. Relationship building. Ethical and social implications of technology integration.
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.
~~Advanced assessment techniques and strategies for rehabilitation settings.~~ Advanced assessment techniques and strategies for rehabilitation counseling and clinical mental health counseling settings.
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 849 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.~~ Community-based 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.~~ Community-based counseling practicum.
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

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.~~ R: Open 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 Second Language Studies Major and 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.

~~Classroom diagnostic and achievement assessment. Reliability and validity of language tests. Alternative assessment methods. Standardized and performance-based testing. Program-level assessment. Measuring language proficiency for research.~~ Classroom diagnostic and achievement assessment for second, additional, heritage, and multi-language learning. Reliability and validity of language tests. Alternative assessment methods. Standardized and performance-based testing. Program-level assessment. Measuring language proficiency for research.
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.

Functions and graphs. Equations and inequalities. Exponential and logarithmic functions. Trigonometric functions. Systems of equations. Binomial theorem.
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

Binomial and multinomial theorems. Graphs and digraphs, graph coloring. Generating functions, asymptotic analysis, trees. Representing graphs in computers.
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.

Lebesgue measure on real line, general measure theory. Convergence theorems, Lusin's theorem, Egorov's theorem, Lp-spaces, Fubini's theorem. Functions of bounded variation, absolutely continuous functions, Lebesgue differentiation theorem.
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. Consistency, stability and convergence. Finite difference, finite element, shooting methods for boundary 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.
Fundamental group and covering spaces, van Kampen's theorem. Homology theory, Differentiable manifolds, vector bundles, transversality, calculus on manifolds. Differential forms, tensor bundles, deRham theorem, Frobenius theorem.
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 Moebius 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 ad joint 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

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.
Hilbert spaces, Banach spaces and locally convex vector spaces. Topics include Riesz representation theorem, Parseval's identity, Riesz-Fisher theorem, Fourier series operators, Hahn-Banach theorem, open mapping and closed graph theorems, Banach-Steinhaus theorem, duality theory for locally convex spaces, convexity, Krein-Milman theorem, theory of distributions, compact operators.
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 thoerem.
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.
Riemann surfaces, Serre duality, Riemann-Roch theorem. Weierstrass points, Abel's theorem, Plucker formulas. Hermitian metrics, connections, curvature, Hodge theorem. 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

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
~~Spring of every year.~~ Fall 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~~
ORT 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~~
ORT 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 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.~~ 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 294H.
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 201~~ P: TE 101
Math curriculum standards for grades PK-6. Building positive math identities in diverse learners. Eliciting children's mathematical thinking. Pedagogical practices for small- and whole-group math activities.
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.
Science curriculum standards for grades 3-6. Culture and equity in science. Eliciting children and community interests and resources. Building positive science identities for diverse learners in classrooms.
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. ~~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. ~~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 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. ~~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 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

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)

Teaching language and literacy to diverse learners in grades 3-6. Literacy learning environments. Culturally responsive practices in literacy. Literacy curriculum design and assessment. Teaching motivation and engagement, phonics, spelling, syntax, reading fluency, vocabulary, comprehension, composition, and speaking and listening in grades 3-6.
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. ~~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. ~~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. ~~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. ~~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).
Building mathematical relationships with diverse learners in grades PK-3. Planning mathematics lessons. Designing and using formative and summative assessment in mathematics. Choosing representations, eliciting children's thinking, and implementing tasks to develop children's understanding of counting, whole number, and operations.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
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. ~~3(3-2)~~ 3(3-0) P: TE 406A ~~R: Open to students in the Elementary Teacher Certification Program (Admitted).~~ R: Open to students.
Building positive mathematical identities in diverse learners in grades PK-3. Planning series of mathematics lessons. Pedagogical practices for small- and whole-group activities. Choosing representations, eliciting children's thinking, and implementing tasks to develop children's understanding of attribution and fractions.
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.~~ 3(3-0) ~~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.~~ Practices of writing, composing, designing, and making primarily digital texts. Practice informed by current topics in and theories of technical and professional communication and 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