

MICHIGAN STATE UNIVERSITY

Report of
THE UNIVERSITY COMMITTEE ON CURRICULUM
to the Faculty Senate
February 15, 2022

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

February 15, 2022

TO: Faculty Senate

This report is prepared and distributed for the following purposes:

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

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

PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES:

Organized by colleges in alphabetical order. For a given college, academic units are organized in alphabetical order. For a given academic unit, degrees, majors, and specializations are organized in alphabetical order.

PART II - NEW COURSES:¹

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

PART III - COURSE CHANGES:¹

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

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

¹One or more of the abbreviations that follow may be included in a course entry:

- P: = Prerequisite monitored in SIS
- C: = Corequisite
- R: = Restriction
- RB: = Recommended background
- SA: = Semester Alias

MICHIGAN STATE UNIVERSITY

February 15, 2022

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 Arts** degree in **Interior Design** in the School of Planning, Design and Construction.
 - a. Under the heading **Admission**, replace paragraph three with the following:

Selective admissions are made at the end of spring semester for Michigan State University and transfer students from those students who have met the criteria referenced. The final selection of students to be admitted to the major is based on the cumulative grade–point average of all courses taken and a grade–point average calculated for selected courses and portfolio review by faculty members.
 - b. Under the heading **Requirements for the Bachelor of Arts Degree in Interior Design**, make the following changes:
 - (1) In item 1., replace paragraph two with the following:

The University's Tier II writing requirement for the Interior Design major is met by completing Interior Design 442. This course is referenced in item 3. below.
 - (2) Delete items 3. b. and 3. c.
 - (3) Reletter item 3. d. to 3. b. and replace with the following:

Any two of the following History of Arts options (6 to 9 credits):

 - (1) Any History of Art course (3 to 4 credits).
 - (2) Any History of Art course (3 to 4 credits).
 - (3) IDES 490 Independent Study (3 to 5 credits) earned through the Interior Design Education Abroad program.
 - (4) IDES 456 Historic Preservation and Sustainability (3 credits).

Effective Fall 2022.

2. Change the requirements for the **Agricultural Technology Certificate** in **Agricultural Industries** in the Institute of Agricultural Technology.

a. Under the heading **Requirements for Agricultural Industries** make the following changes:

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

CSS	143	Introduction to Soil Science	2
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Add the following course:

CSS	203	World of Soils	2
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Effective Summer 2022.

3. Change the requirements for the **Agricultural Technology Certificate** in **Agricultural Operations** in the Institute of Agricultural Technology.

a. Under the heading **Requirements for Agricultural Operations** make the following change:

(1) Change the total credits for the program from '60' to '60 to 65'.

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

ABM	130	Farm Management I	3
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Add the following course:

AFRE	130	Farm Management I	3
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(3) In item 3., add the following last sentence:

Students at Muskegon Community College are required to complete 28 additional credits of course work. Students at Southwestern Michigan College are required to complete 30 to 31 additional credits of course work.

Effective Spring 2022.

4. Change the requirements for the **Agricultural Technology Certificate** in **Food Processing, Technology and Safety** in the Institute of Agricultural Technology.

a. Under the heading **Requirements for Food Processing, Technology and Safety** make the following changes:

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

ABM	100	Decision-making in the Agri-Food System	3
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Add the following course:

AFRE	100	Decision-making in the Agri-Food System	3
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(2) In item 3., delete 'Lansing Community College' and 'Northwestern Michigan College'.

(3) In item 3., add 'Wayne County Community College District'.

(4) In item 3., add 'Students at Muskegon Community College are required to complete 28 additional credits of course work'.

Effective Spring 2022.

5. Change the requirements for the **Agricultural Technology Certificate** in **Fruit and Vegetable Crop Management** in the Institute of Agricultural Technology.
- a. Under the heading **Requirements for Fruit and Vegetable Crop Management** make the following changes:
- (1) In item 1., delete the following course:
ABM 130 Farm Management I 3
Add the following course:
AFRE 130 Farm Management I 3
 - (2) In item 1., change the credits of HRT 218 from '3' to '2'.
 - (3) In item 2., change the elective credits from '7' to '8'.
 - (4) In item 3., delete 'Montcalm Community College'.
 - (5) In item 3., add 'Students at Muskegon Community College are required to complete 32 additional credits of course work'.

Effective Spring 2022.

6. Change the requirements for the **Agricultural Technology Certificate** in **Landscape Management** in the Institute of Agricultural Technology.
- a. Under the heading **Requirements for Landscape Management** make the following change:
- (1) In item 1., change the credits of HRT 218 from '3' to '2'.
 - (2) In item 2., change the elective credits from '3' to '4'.
 - (3) In item 3., delete 'Montcalm Community College' and 'Southwestern Michigan College'.
 - (4) In item 3., add 'Students at Muskegon Community College are required to complete 32 additional credits of course work'.

Effective Spring 2022.

COLLEGE OF ARTS AND LETTERS

1. Change the requirements for the **Minor in Jewish Studies** in the College of Arts and Letters.
- a. Under the heading **Minor in Jewish Studies** replace the entire entry with the following:
1. The student must complete a minimum of 18 credits from the following. Up to 12 credits may be in Hebrew 101 or higher. Students enrolled in study abroad Israeli institutions may use appropriate courses towards the minor if approved in advance by the Jewish Studies Director.
English
ENG 356 Readings in Jewish Literature 3
Hebrew
HEB 101 Elementary Hebrew I 4
HEB 102 Elementary Hebrew II 4
HEB 201 Second-Year Hebrew I 4
HEB 202 Second-Year Hebrew II 4

HEB 290	Independent Study	1 to 8
HEB 490	Independent Study	1 to 8
History		
HST 201	Historical Methods and Skills	3
HST 317	American Jewish History	3
HST 355	Spain and the Muslim World	3
HST 388	World War II: Causes, Conduct and Consequences	3
HST 392	History of the Holocaust	3
HST 411	European Jewish History	3
HST 480	Seminar in American History (W)	3
HST 481	Seminar in Ancient History (W)	3
HST 490	Independent Study	1 to 4
HST 499H	Senior Honors Thesis	3
To be counted toward the requirements for the minor, the content of HST 201, 355 388, 480, 481, 490, and 499H must have sufficient Jewish studies content and be approved by the Jewish Studies Director.		
Integrative Studies in Arts and Humanities		
IAH 211C	Area Studies and Multicultural Civilizations: The Americas (D)	4
IAH 211D	Area Studies and Multicultural Civilizations: The Middle East (I)	4
IAH 221A	Great Ages: The Ancient World (I)	4
IAH 231B	Themes and Issues: Moral Issues and the Arts and Humanities (D)	4
IAH 241F	Creative Arts and Humanities: Traditions in World Art (I)	4
Integrative Studies in the Social Sciences		
ISS 315	Global Diversity and Interdependence (I)	4
ISS 330B	Asia: Social Science Perspectives (I)	4
To be counted toward the requirements for the minor, the content of these courses must have sufficient Jewish studies content and be approved by the Jewish Studies Director. The courses may be used to satisfy the requirements for the minor and University requirements.		
James Madison College		
MC 220	International Relations I: World Politics and International Security	4
MC 281	Immigrants, Minorities, and American Pluralism	4
MC 290	Special Topics	4
MC 324A	Regional Politics, Cooperation, and Conflict in the Middle East	4
MC 325	State and Society in Comparative Perspective	4
MC 335	Israeli Politics, Cultures and Society	4
MC 387	Jews and Anti-Semitism	4
MC 390	Advanced Topics in Public Affairs	4
MC 391	Selected Topics in Public Affairs	4
MC 395	Cultural Dimensions of Public Affairs	4
MC 399	Advanced Independent Study	1 to 4
MC 490H	Honors Independent Study	4
MC 492	Senior Seminar in International Relations (W)	5
MC 498	Senior Seminar in Social Relations (W)	5
To be counted toward the requirements for the minor, the content of MC 220, 281, 290, 324A, 325, 390, 391, 395, 399, 490H, 492, and 498 must have sufficient Jewish studies content and be approved by the Jewish Studies Director.		
Jewish Studies		
JS 390	Special Topics in Jewish Studies	4
JS 399	Independent Study (W)	1 to 4
JS 400	Study Abroad in Jewish Studies (W)	2 to 4
JS 490H	Honors Independent Study (W)	2 to 4
JS 493	Jewish Studies Internship	1 to 3
JS 495	Seminar in Jewish Studies (W)	3 or 4
Political Science		
PLS 345	Religion and World Politics	3
To be counted toward the requirements for the minor, the content of PLS 345 must have sufficient Jewish studies content and be approved by the Jewish Studies Director.		
Office of the Provost		
UGS 200H	Honors Research Seminar	1 to 4

Religious Studies

REL 150	Introduction to Biblical Literature	3
REL 301	Methods and Theories in the Study of Religion	3
REL 310	Judaism	3
REL 412	Jewish Mysticism (W)	3
REL 413	Jewish Philosophy (W)	3
REL 414	Jewish Identity (W)	3

To be counted toward the requirements for the minor, the content of REL 150 or 301 must have sufficient Jewish studies content and be approved by the Jewish Studies Director.

Residential College of Arts and Humanities

RCAH 391	Independent Study	1 to 4
RCAH 395	Special Topics in Arts and Humanities	3

To be counted toward the requirements for the minor, the content of RCAH 391 and 395 must have sufficient Jewish studies content and be approved by the Jewish Studies Director.

Women's Studies

WS 490	Independent Study	1 to 3
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To be counted toward the requirements for the minor, the content of WS 490 must have sufficient Jewish studies content and be approved by the Jewish Studies Director.

2. **Completion of a capstone experience (2 to 5 credits)**

This requirement may be satisfied by the completion of any Director approved Jewish Studies related course with a major research component (eg. MC 335, MC 387, HST 392); an independent study of at least 2 credits; study abroad or study away program with a culminating research paper or reflective project; JS 493 Jewish Studies Internship; or a 2-credit extensive portfolio and reflective essay.

Social Science Track in Jewish Studies

Students majoring in a College of Social Science major may complete a minimum of 16 credits from the following set of requirements in fulfillment of the minor requirements in lieu of the requirements above. Students who plan to complete these requirements should consult an undergraduate advisor in the College of Social Science and the Director of the Serling Institute for Jewish Studies and Modern Israel. The requirements will meet the College of Social Science college interdisciplinary minor requirement.

a.	The following courses (6 credits):		
	HST 317	American Jewish History	3
	HST 392	History of the Holocaust	3
b.	One of the following courses (4 credits):		
	MC 335	Israeli Politics, Cultures, and Society	4
	MC 387	Jews and Antisemitism	4
c.	Two of the following courses (6 to 8 credits):		
	ENG 356	Readings in Jewish Literature	3
	HEB 102	Elementary Hebrew II	4
	HEB 201	Second-Year Hebrew I	4
	HEB 202	Second-Year Hebrew II	4
	JS 390	Special Topics in Jewish Studies	4
	JS 399	Independent Study (W)	1 to 4
	JS 400	Study Abroad in Jewish Studies (W)	2 to 4
	JS 493	Jewish Studies Internship	1 to 3
	JS 495	Seminar in Jewish Studies (W)	3 or 4
	REL 310	Judaism	3
	REL 412	Jewish Mysticism (W)	3
	REL 413	Jewish Philosophy (W)	3
	REL 414	Jewish Identity (W)	3

2. Change the requirements for the **Doctor of Philosophy** degree in **English** in the Department of English. The University Committee on Graduate Studies (UCGS) approved this request at its January 24, 2022 meeting.

- a. Under the heading **Requirements for the Doctor of Philosophy Degree in English** add the following statement after item 1.:

Students pursuing the Graduate Certificate in Film Studies may substitute FLM 800 Methods in Film Studies for ENG 802 above.

Effective Fall 2022.

3. Change the requirements for the **Disciplinary Teaching Minor in English** that is available for secondary certification in the Department of English. The Teacher Education Council (TEC) approved this request at its January 10, 2022 meeting.

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

1. All of the following courses (9 credits):

ENG	210	Introduction to Literary Studies	3
ENG	302	Introduction to English Language Studies	3
ENG	308	Readings in Literature for Young Adults	3
2. One of the following courses (3 or 4 credits):

ENG	280	Introduction to Literary Theories	3
FLM	230	Introduction to Film	4
3. One of the following courses (3 credits):

ENG	320A	Methodologies of Literary History: Genre	3
ENG	320B	Methodologies of Literary History: Region, School, or Movement	3
ENG	320C	Methodologies of Literary History: Canon Formation	3
4. One of the following courses (3 or 4 credits):

ENG	360	Studies in Postcolonial and Diaspora Literature (W)	3
ENG	362	Studies in Modern/Contemporary Literature (W)	3
ENG	364	Studies in 18th-/19th-Century Literature (W)	3
ENG	368	Studies in Medieval/Early Modern Literature (W)	3
ENG	408	Critical Literacies and Communities	4
5. At least one 300-400 level ENG course (3 or 4 credits).
Students pursuing secondary certification may not use ENG 490 or 493 to meet this requirement. Students may substitute TE 448 Issues of Diversity in Children's and Adolescent Literature, to fulfill this requirement.
6. Both of the following courses (2 credits):

TE	409	Crafting Teaching Practice in the Secondary Teaching Minor	1
TE	503	Internship in Teaching Diverse Learners in Additional Endorsement Areas	1

Effective Fall 2022.

4. Change the requirements in the **Minor in Italian** in the Department of Romance and Classical Languages.

a. Under the heading **Requirements for the Minor in Italian** replace item 2. with the following:

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

IAH	209	Art, the Visual, and Culture (D)	4
IAH	241C	Creative Arts and Humanities: Global Cultural and Artistic Traditions (I)	4
ITL	250	Topics in Italian Cultures for English Speakers	3
ITL	400	Reading Italian	3
ITL	490	Independent Study	1 to 4
ROM	355	French, Italian, Portuguese or Spanish Cinema	4

Students must obtain approval from the Department of Romance and Classical Studies prior to enrollment in any of these courses with the exception of ITL 250. The IAH courses are offered only as part of the education abroad program in Ferrara, Italy. ITL 400 is only offered summer semester every three years.

Effective Fall 2022.

ELI BROAD COLLEGE OF BUSINESS

1. Establish a **Master of Science** degree in **Customer Experience Management** in the Department of Marketing. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its October 18, 2021 meeting.

a. **Background Information:**

Customer Experience Management (CXM) is a business imperative for most organizations, whether for-profit or non-profit, public or private. Globally, over 17 million people self-identify on LinkedIn as working in the customer experience field. The business press is replete with articles on the importance of customer experience. In a recent survey, Gartner (2017) found that 81% of organizations plan to compete mostly or completely on the basis of customer experience within the next few years. In a 2019 survey, CX was found to drive over two-thirds of customer loyalty, outperforming brand and price combined (Gartner 2019 CX Management Survey).

There is a growing number of leadership positions in CX, with many organizations declaring their commitment to CXM by hiring leaders to drive it. Around 90% of organizations have a CXO (Chief Experience Officer) or CCO (Chief Customer Officer) today, compared to 60% two years ago (Gartner 2019 CX Management Survey).

Despite the prominence of CX, there are currently no graduate programs in CXM in North America (there are three programs in Europe). CXM draws from a variety of disciplines, including consumer insights, sales, advertising, human resources, and supply chain management. This wide array of fields leaves many practitioners with significant gaps in their skill sets.

There is a substantial demand from both working professionals and their employers. In a Summer 2020 survey of Working Professionals, 85% are interested in a master's degree in customer experience management. The same study found that of 160 Decision Makers, 78% of USA companies and 89% of international companies are likely to hire students graduating from the program (survey conducted by the Broad Department of Marketing 2020). At this time there is no program like this, at either the graduate or undergraduate level, in North America.

b. **Academic Programs Catalog Text:**

The Master of Science degree in Customer Experience Management prepares individuals for careers in customer experience management. The degree can be completed in one calendar year (full-time) or twenty months (part-time). The program is specifically designed to develop skills in organizational development and change, understanding customers and employees, experience design and innovation, employee experience and engagement, and data analytics and continuous improvement technical skills. The program is available only online.

In addition to meeting the requirements of the university and of the Eli Broad College of Business and Graduate School of Management, students must meet the requirements specified below.

Admission

For admission to the master's degree program in customer experience management on regular status, the student must:

1. Submit to the Department of Marketing a completed application packet that is available from the department.
2. Have a bachelor's degree from a recognized educational institution.
3. Have a grade-point average of at least 3.00 in the last two years of undergraduate work.
4. Take the Graduate Management Admission Test (GMAT) and have the scores submitted to the Master of Science in Customer Experience Management program. The test must be taken not more than five years prior to the submission of the application for admission to the program. The GMAT score may be waived based on previous work experience.

Admission to the program is competitive, and meeting the minimum standards listed above does not guarantee admission. The applicant's overall record is considered including letters of recommendation, the student's statement of objectives, work experience, extra-curricular activities, and TOEFL scores (for international students). Admission is also subject to space availability.

Prior to enrollment in the Master of Science degree in Customer Experience Management, the student must have:

1. a working knowledge of personal computers including word processing, spreadsheets, networking, and database management systems.
2. a basic understanding of marketing and the management of people.
3. a lap-top computer.

Students who do not meet the requirements for admission to the program on regular status may be admitted on a provisional basis to remove deficiencies. Collateral course work will not count towards the requirements for the degree.

Requirements for the Master of Science Degree in Customer Experience Management CREDITS

The Master of Science degree in Customer Experience Management is available only under Plan B (without thesis). A total of 30 credits are required for the degree.

The students must complete the following:

MKT	878	The Customer-Centric Organization	2
MKT	879	Organizational Development and Change	2
MKT	880	Consumer Decision Making and Behavior	2
MKT	881	Qualitative Research	2
MKT	883	Qualitative Data Synthesis and Analysis	2
MKT	885	Experience Analytics	2
MKT	886	Human-Centered Design and Innovation	2
MKT	887	Customer Experience Strategy	2
MKT	888	Customer Experience Design	2
MKT	889	Digital Customer Experience Design	2
MKT	892	The Employee Experience	2
MKT	893	Employee Engagement	2
MKT	895	Customer Relationship Management	2
MKT	896	Measuring the Experience	2
MKT	897	Data Analysis, Integration and Visualization	2

COLLEGE OF COMMUNICATION ARTS AND SCIENCES

1. Change the requirements for the **Minor in Advertising Analytics** in the Department of Advertising and Public Relations.

- a. Under the heading **Requirements for the Minor in Advertising Analytics** make the following changes in item 2.:

- (1) Delete the following course:

ADV 420 New Media Driver's License 3

Add the following course:

PR 330 Social Media Management 3

Effective Summer 2022.

2. 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. delete the following course:

ADV 225 Writing for Public Relations 3

Add the following courses:

ADV 225 Basic Skills for Advertising Careers 3

or

PR 225 Writing for Public Relations 3

- (2) In item 2. b. delete the following course:

ADV 420 New Media Driver's License 3

Effective Summer 2022.

3. Establish a **Master of Science** degree in **User Experience** in the Department of Media and Information. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its October 18, 2021 meeting.

- a. **Background Information:**

As the world grows increasingly dependent on new technologies, the need has never been greater to create user-centered and socially responsive interactive technologies, applications, and information systems for diverse populations. Technology is an integral part of everyday life, touching every aspect of how people learn, work, and play. With the fast pace of technology innovation, information technology is transforming the world around us, from cars to travel, from games for learning and social change to entertainment, from enterprise-level information systems to personal mobile apps for health and wellness. Further, how we interact with technology is becoming critically important for businesses to understand, making the study of the relationship between humans and computers one of the most dynamic and significant fields of technical investigation.

User experience (UX) refers to any interactions users have with the company and their products, systems, or services. UX design considers all the different elements that shape those experiences

by focusing on humans and their needs, as well as business goals and objectives during the design process to create user-centered and socially responsive interactive technologies, applications, and information systems that are effective, efficient, and easy-to-use. The future of computing lies in understanding and creating innovative, high-quality designs through human-computer interaction research and principles integrated with user-centered design (ISO, 2010), [1] user research, usability evaluation [2], information architecture, information science, user interface design, interaction design, visual design, content strategy, accessibility [3], web analytics, and project management (*usability.gov*). Taken together, UX professionals are valuable assets for businesses: they can identify how end users are currently using a product, enhance designs, collaboratively develop new products to best meet the needs of their users, and adapt to emergent social and technological settings. UX is about determining when and where design is appropriate and needed, how to develop and maintain technological systems, and how to appropriately consider the ecologies around technology use, including their relevance to other technologies, materials and social embeddedness.

With the rise in digital technologies, the strategic role of UX in enhancing an organization's competitive advantage has grown exponentially. The business case for enterprise UX is compelling; success stories highlight excellent return on investment (ROI). According to the 2019 State of UX Enterprise Survey, 70% of enterprise CEOs see UX and customer experience as a competitive differentiator, 88% reported that customer mapping (mapping customer behavior across all touchpoints) had a positive impact on their product offerings by increasing retention rates, increasing lifetime value, increased sales, and reducing customer service calls.[4]-[5]

Now more than ever, marketplace success depends on being able to offer innovative, user-centered, and socially responsive products that meet the needs, desires, and expectations of diverse users.

UX professionals are in great demand as design and thought leaders because companies, governments, and other organizations have recognized the benefits of institutionalizing user-centered design best practices, and are integrating user-centered design, usability, and accessibility standards into their design and development processes. Careers in UX rank highly in several lists of top high-paying careers and UX professionals have excellent earning potential. The User Experience Professionals' Association reported the median salary is \$95,000 for UX professionals in 2018. [6] The Nielsen Norman Group (highly-regarded in UX circles) found starting salaries in UX design are about \$67,000 (in 2019-dollars) for entry-level salaries and about \$95,000 within five years. [7] The Onward Search Salary Guide 2019 indicates UX designer salaries range from \$76,600 to \$113,500 (average salary \$95,050) [8]. Salaries for a user researcher range from \$67,300 to \$93,700 (average salary \$80,500) and a UX/UI Manager can command between \$98,400 and \$151,200 (average salary \$124,800). According to Glassdoor's 50 Best Jobs in America 2018 report, a UX designer's median base salary is \$90,000 while a UI developer comes in at \$95,000 [9]. Similarly, the Creative Group Salary Guide 2018 gives UX designer salary ranges from \$77,400 to \$114,700, while UX researchers can expect between \$70,500 and \$96,200, and UX manager salaries range from \$99,700 to \$153,300 [10].

The Department of Media and Information has long been researching and teaching a variety of courses about the relationship between information and communications technologies and the people, communities, institutions, and governments that interact with them. Following the global iSchool movement, of which the Department of Media and Information is a member, we are assembling a new set of courses into this User Experience (UX) major to train a new class of professionals who both understand the way modern technologies are designed, but also how those technologies influence and shape people, groups, communities, organizations, governments, and society.

Currently, there are no traditional, online, or hybrid master's programs at Michigan State that offer this collection of topics and whose goal is to provide educational development to information professionals to work at the intersection of cutting-edge technology and social change as user experience practitioners. A small number of online or hybrid master's programs have content that crosses over into core content areas in the college, such as the Master of Arts degree in Digital Rhetoric and Professional Writing in the College of Arts and Letters along with WRA 482 Information and Interaction Design; the Master of Arts degree in Program Evaluation in the College of Social Science along with PSY 882 Evaluation Data Collection Methods, but no program has more than one course with similar content in common to the proposed Master of Science degree in User Experience, as the foundational perspectives are different.

The main competitor in Michigan is the University of Michigan, which offers a traditional MS program in Information that has a UX/HCI concentration; however, it is not designed or offered as a completely online, asynchronous program. There are also a small number of online programs nationally, mostly from non-peer institutions.

- [1] International Organization for Standardization (2010). Ergonomics of human-system interaction – Human-centered design for interactive systems. (ISO 9241-210:2010).
- [2] International Organization for Standardization (ISO). (2018). Ergonomics of human-system interaction — Part 11: Usability: Definitions and concepts. (ISO Reference No. 9241-11:2018(en)).
- [3] International Organization for Standardization (2012). Information technology – W3C Web Content Accessibility Guidelines (WCAG) 2.0. (ISO/IEC 40500:2012).
- [4] Ratcliff, C. (2019). 12 fascinating UX and user research stats to help your business case. UserZoom, <https://www.userzoom.com/blog/fascinating-stats-about-ux-andusability-testing-to-help-your-business-case/>
- [5] Spool, J. M. (2017). A proven method for showing the value of good UX. User Interface Engineering, <https://articles.uie.com/a-proven-method-for-showing-the-value-of-good-ux/>
- [6] Sauro, J. (2018). User experience salaries and calculator, MeasuringU, <https://measuringu.com/salary-survey2018/>
- [7] Nielsen, J. (2015). Salary trends for UX professionals, Nielsen Norman Group, <https://www.nngroup.com/articles/salary-trends-usability-professionals/>
- [8] Onward Search. (2018). Digital creative salary guide 2018, <https://www.onwardsearch.com/digital-creative-salary-guide-2018/>
- [9] Glassdoor. (2020). 50 best jobs in America, https://www.glassdoor.com/List/Best-Jobs-in-America-LST_KQ0,20.htm
- [10] Robert Half. (2020). Creative and marketing salary data and hiring trends, <https://www.roberthalf.com/salary-guide/creative-and-marketing>

b. Academic Programs Catalog Text:

The Master of Science degree in User Experience program will prepare students for many kinds of careers in human-computer interaction, user experience design, and human-centered research. The online Master of Science in User Experience program is designed to accelerate career prospects of early and mid-career professionals for leadership roles within information technology environments. The program will provide advanced user experience design training that integrates foundational human-computer interaction (HCI) knowledge with industry-relevant methods and social responsibility, which are necessary in the dynamic, agile IT development environment of the 21st century global workplace.

Admission

Applications for admission to the program are reviewed by faculty who look for indications of a high probability of success. Such indications include a high level of academic performance, experience with educational technology, and consistency of professional goals with the objectives of the program.

To be considered for admission to the program, an applicant must:

1. Have earned a bachelor's degree from a recognized, accredited educational institution.
2. Present evidence of competency in English, assessed with TOEFL, IELTS, or MELAB scores, if English is not the first language.
3. Submit a letter of recommendation.
4. Submit official transcripts.
5. Submit a resume/CV and portfolio (optional).
6. Submit a 1-2 page statement describing the applicant's background and interest in the program.
7. Submit both departmental and university application forms.

Requirements for the Master of Science Degree in User Experience

CREDITS

The program is available only online and under Plan B (without thesis). The student must complete a total of 30 credits for the degree.

1. The following course (3 credits):
UX 800 User Research and Design

2. Complete 24 credits from the following:

UX	802	Current Topics in UX	3
UX	805	Quantitative Analysis and Insights in UX	3
UX	810	Social Science for Design	3
UX	815	Programming Fundamentals for UX	3
UX	820	Usability Evaluation	3
UX	825	Visual Design Fundamentals	3
UX	830	Design for Interactivity	3
UX	835	Accessibility and Design	3
UX	840	UX and Society	3
3. The following capstone/practicum course (3 credits):

UX	898	UX Capstone	3
----	-----	-------------	---
4. Completion of a final examination or evaluation.

Effective Fall 2022.

COLLEGE OF EDUCATION

1. Change the requirements for **Teacher Certification** in the College of Education. The Teacher Education Council (TEC) approved this request at its January 10, 2022 meeting.
 - a. Under the heading **REQUIREMENTS FOR TEACHER CERTIFICATION** replace the entire entry with the following:

Disciplinary Course Requirements and Pedagogy Course Requirements

For some majors, disciplinary courses in addition to, or in lieu of, the courses that are required for the bachelor's degree in the disciplinary major are required for teacher certification. Furthermore, for some disciplines, additional pedagogy courses are required for teacher certification.

For additional information concerning disciplinary course requirements and pedagogy course requirements, refer to teacher certification options in the catalog sections for the colleges, departments, and schools that administer disciplinary majors that are available for teacher certification.

General–Liberal Education Requirements

The State of Michigan requires applicants for provisional certification to have completed at least 40 semester credits in a program of general or liberal education, which is designed to ensure that teachers understand the substance, concepts, and methods of the principal areas of human knowledge, and possess the skills essential to communication and inquiry in modern society. The courses used to fulfill the university's Integrative Studies and Tier I writing requirements will count for 30 of the 40 credits required in general-liberal education.

Observation and Field Experience Requirements

Included in the requirements for teacher certification are courses that involve observations and field experiences in schools. Students are responsible for their transportation to and from observations and field experiences as well as any associated costs (e.g. transportation).

Teacher Certification Internship Year Studies Program

Persons may gain access to the Teacher Certification Internship Year Studies Program as follows:

1. **Elementary Teacher Certification:**
 - a. Students who complete the requirements for the bachelor's degree with a major in child development, education, or special education along with the teaching major, and all elementary program requirements are thereby qualified to pursue the Internship Year Studies Program.
 - b. Michigan State University students who were admitted to the Teacher Certification Program with a disciplinary major other than those referenced in item 1. a. above, who complete the requirements for a bachelor's degree at

Michigan State University, and who complete the requirements for teacher certification referenced in items 2. and 3. a. (1) through (3) in the section “*Prerequisites for Admission to the Internship Year Studies Program*” below are thereby qualified to pursue the Internship Year Studies Program.

- c. Students who complete the requirements for a bachelor’s degree at another educational institution, or who complete the requirements for a bachelor’s degree at Michigan State University without having been admitted to the Teacher Certification Program, must meet the requirements referenced in the section “*Prerequisites for Admission to the Internship Year Studies Program*” below in order to be considered for admission to that program.

Students who plan to direct preschool programs must, and students who plan to teach children under five years of age should, meet the requirements for the Bachelor of Arts degree with a major in Child Development (teacher certification emphasis) and meet the requirements referenced in items 3. a. (1) through (3) in the section “*Prerequisites for Admission to the Internship Year Studies Program*” below in order to be considered for admission to the Internship Year Studies Program. Students who plan to teach kindergarten or early elementary grades may gain access to the Internship Year Studies Program via any one of the three alternatives referenced in item 1. above.

2. **Secondary Teacher Certification:**

- a. Michigan State University students who were admitted to the Teacher Certification Program with a disciplinary major other than those referenced in item 1. a. above and those referenced in items 3. a. and b. below, who complete the requirements for a bachelor’s degree at Michigan State University, and who complete the requirements for teacher certification referenced in items 2. and 3. b. (1) through (3) in the section on “*Prerequisites for Admission to the Internship Year Studies Program*” below are thereby qualified to pursue the Internship Year Studies Program.
- b. Students who complete the requirements for a bachelor’s degree at another educational institution, or who complete the requirements for a bachelor’s degree at Michigan State University without having been admitted to the Teacher Certification Program, must meet the requirements referenced in the section on “*Prerequisites for Admission to the Internship Year Studies Program*” below in order to be considered for admission to that program.

3. **Secondary Teacher Certification K-12 Endorsed Subject Areas:**

- a. Michigan State University students who were admitted to the teacher certification program with a music education disciplinary major and who complete the requirements for teacher certification referenced in items 2. and 3. b. (1) and (2) in the section on “*Prerequisites for Admission to the Internship Year Studies Program*” below are thereby qualified to pursue the Internship Year Studies Program.
- b. Michigan State University students who were admitted to the Teacher Certification Program with an art education disciplinary major, who complete the requirements for a bachelor’s degree from Michigan State University, and who complete the requirements for teacher certification referenced in items 2. and 3. b. (1) and (2) in the section on “*Prerequisites for Admission to the Internship Year Studies Program*” below are thereby qualified to pursue the Internship Year Studies Program.
- c. Michigan State University students who were admitted to the Teacher Certification Program with a disciplinary major other than those referenced in items 2. and b. above, who complete the requirements for a bachelor’s degree at Michigan State University, and who complete the requirements for teacher certification referenced in items 2. and 3 b. (1) and (2) under the heading “*Prerequisites for Admission to the Internship Year Studies Program*” below are thereby qualified to pursue the Internship Year Studies Program.
- d. Students who complete the requirements for a bachelor’s degree at another educational institution, or who complete the requirements for a bachelor’s degree at Michigan State University without having been admitted to the Teacher Certification Program, must meet the requirements referenced in the section on “*Prerequisites for Admission to the Internship Year Studies Program*” below in order to be considered for admission to that program.

Prerequisites for Admission to the Internship Year Studies Program

All students seeking admission to the Internship Year Studies Program must have:

1. A baccalaureate degree from a recognized educational institution with a cumulative grade–point average of at least 2.5.
2. Passed all portions of the Michigan Test for Teacher Certification (MTTC), Professional Readiness Examination (PRE), or demonstrated proficiency using approved alternative pass measures and completed the State of Michigan Department of Education’s technology requirement.
3. Completed the following undergraduate requirements for teacher certification:
 - a. **Undergraduate Requirements for Elementary Teacher Certification:**
 - (1) The professional education courses listed in the *“Undergraduate Professional Education Course Requirements for Elementary Teacher Certification”* section below.
 - (2) The Elementary Education Courses listed in the *“Undergraduate Professional Education Course Requirements for Elementary Teacher Certification”* section below.
 - (3) Courses comprising a grade band concentration listed in the *Undergraduate Professional Education Course Requirements for Elementary Teacher Certification* section below.
 - (4) The *Teaching English to Speakers of Other Languages (TESOL)* courses listed in the *Undergraduate Professional Education Course Requirements for Elementary Teacher Certification* section below.
 - (5) Optional Additional Teaching Endorsements in Arabic, Chinese, French, German, Japanese, or Spanish.
 - b. **Undergraduate Requirements for Secondary Teacher Certification:**
 - (1) The Professional Education Courses listed below in the section on the *“Undergraduate Professional Education Course Requirements for Secondary Teacher Certification.”*
 - (2) An approved disciplinary major for secondary teacher certification, with a grade-point average of at least 2.5. The approved disciplinary majors for secondary teacher certification are listed below in the section on *“Options for Acceptable Subject Matter Teaching Majors and Minors for Secondary Teacher Certification.”*
 - (3) An approved disciplinary teaching minor for secondary teacher certification, with a grade-point average of at least 2.5. The approved disciplinary teaching minors for secondary teacher certification and their requirements are listed below in the section on *“Options for Acceptable Subject Matter Teaching Majors and Minors for Secondary Teacher Certification”*.
4. Earned a grade point average of 2.5 or above for pre-internship professional education courses required for teacher certification with no individual grade below 2.0.
5. Completed any disciplinary courses and pedagogy courses that are required in addition to the courses that are required for the disciplinary major and the courses that are referenced in item 3.a.(1) or 3.b.(1) above.

Any additional disciplinary courses and any additional pedagogy courses that are required for teacher certification are referenced in the sections on teacher certification options in the catalog sections for the colleges, departments, and schools that administer the disciplinary majors that are available for teacher certification.
6. Passed the required State of Michigan certification tests for elementary teaching or the appropriate major subject area test for secondary teaching.
7. Submitted a complete conviction disclosure form; and
8. Met professional criteria as specified by the College of Education.

Undergraduate Professional Education Course Requirements for Elementary Teacher Certification

GPA Standards: All elementary teacher candidates must pass the following courses with a minimum grade of 2.0. CEP 240, TE 101, TE 102, TE 150, TE 341, LIN 200 or LIN 401, TE 301, and TE 348. Within the Grade Three through Grade Six concentration: HST 301, HST 302, and ISE 301 must be passed with a minimum grade of 2.0.

- a. **Professional Education Courses** (19 credits):
 All of the following courses (19 credits):
- | | | | |
|-----|-----|---|---|
| CEP | 240 | Diverse Learners in Multicultural Perspectives | 3 |
| TE | 101 | Social Foundations of Justice and Equity in Education | 3 |
| TE | 102 | Pedagogy and Politics of Justice and Equity
in Education | 3 |
| TE | 150 | Reflections on Learning | 3 |
| TE | 341 | Teaching and Learning of (Bi)Multilingual Learners | 3 |
| TE | 371 | Justice and Equity Seminar I | 1 |
| TE | 372 | Justice and Equity Seminar II | 1 |
| TE | 471 | Justice and Equity Seminar III | 1 |
| TE | 472 | Justice and Equity Seminar IV | 1 |
- b. **Elementary Education Courses** (25 or 26 credits):
- (1) All of the following courses (10 credits):
- | | | | |
|----|-----|--|---|
| TE | 100 | Introduction to Early Childhood and
Elementary Education | 1 |
| TE | 333 | Social Studies for Young Learners (PK-6) | 3 |
| TE | 403 | Teaching Science to Diverse Learners
- Elementary | 3 |
| TE | 404 | Teaching of Social Studies to Diverse
Learners-Elementary (W) | 3 |
- (2) **Language Acquisition and Development**
 One of the following courses (3 or 4 credits):
- | | | | |
|-----|-----|-----------------------------|---|
| LIN | 200 | Introduction to Language | 3 |
| LIN | 401 | Introduction to Linguistics | 4 |
- (3) **Literacy**
 Both of the following courses (6 credits):
- | | | | |
|----|-----|--|---|
| TE | 301 | Children's Literacy Development (W) | 3 |
| TE | 348 | Reading and Responding to Children's
Literature | 3 |
- (4) **Mathematics**
 Both of the following courses (6 credits):
- | | | | |
|-----|-----|--|---|
| MTH | 201 | Elementary Mathematics for Teachers I | 3 |
| MTH | 202 | Elementary Mathematics for Teachers II | 3 |
- The completion of Mathematics 201 may satisfy the university mathematics requirement. Mathematics 201 and 202 are prerequisites for Teacher Education 406 or 406A and must be completed with a minimum grade-point of 2.0 prior to enrollment in Teacher Education 406 or 406A.
- c. One of the following concentrations (21 to 29 credits):
Prekindergarten through Grade Three (29 credits):
 All of the following courses:
- | | | | |
|------|------|--|---|
| 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 | 424 | Student Teaching in an Early Childhood Program | 6 |
| TE | 330 | Science Curriculum for Young Learners (PK-3) | 3 |
| TE | 405A | Teaching Literacy to Diverse Learners I (PK-3) | 3 |
| TE | 405B | Teaching Literacy to Diverse Learners II (PK-3) | 3 |
| TE | 406A | Teaching Mathematics to Diverse Learners I (PK-3) | 3 |
| TE | 406B | Teaching Mathematics to Diverse Learners II (PK-3) | 3 |

Grade Three through Grade Six (21 or 22 credits):

1.	One of the following ethnic studies courses (3 or 4 credits):					
	AAAS	100	Pathways into AAAS	3		
	AIIS	201	Introduction to American Indian and Indigenous Studies	3		
	CLS	201	Introduction to Chicano/Latino Studies	3		
	HST	208	Introduction to African History, Culture and Society	4		
	HST	210	Modern East Asia	4		
	HST	309	American Indian History: Precontact to the Present	3		
	HST	310	African American History to 1876	3		
	HST	311	African American History since 1876	3		
	HST	312	African American Women	3		
	HST	327	History of Mexican Americans in the United States	3		
	HST	365	The Vietnam War	3		
	HST	366	Modern Southeast Asia	3		
	HST	371	Women and Gender in Asia	3		
	HST	383	The Caribbean	3		
	HST	384	Modern Mexico	3		
	PLS	304	Minority Politics	3		
	PLS	351	African Politics	3		
	SOC	214	Social Inequality	3		
	SOC	215	Race and Ethnicity	3		
	SOC	375	Urban Sociology	3		
	SSC	293	Introduction to Asian Pacific American Studies	3		
	TE	352	Immigrant Language and Culture	3		
2.	One of the following United States history courses (3 credits):					
	HST	301	Indigenous-European Encounters in North America	3		
	HST	302	Revolutionary America	3		
3.	One of the following arts integration courses (3 credits):					
	TE	430	Introduction to Arts in the Classroom	3		
	TE	431	Learning through Drama	3		
	TE	432	Learning through Movement	3		
4.	All of the following courses (12 credits):					
	ISE	301	Science for Elementary Schools	3		
	TE	332	Science Curriculum for Upper Elementary Learners (3-6)	3		
	TE	405	Teaching Literacy to Diverse Learners (3-6)	3		
	TE	406	Teaching Mathematics to Diverse Learners (3-6)	3		
d.	Teaching English to Speakers of Other Languages (15 or 18 credits):					
	Completion of this requirement along with TE 341 in 2. a. (1) and either LIN 200 or LIN 401 in 2. b. (2) satisfies the course requirements for the additional endorsement in English as a Second Language.					
	(1)	All of the following courses (12 credits):				
		LLT	307	Methods of Second and Foreign Language Teaching	3	
		LLT	346	Pedagogical English Grammar for English Teachers	3	
		LLT	361	Second and Foreign Language Learning	3	
		TE	342	Teaching Methods for (Bi)multilingual Learners	3	
	(2)	Complete either (a) or (b) (3 or 6 credits):				
		(a)	ANP	420	Language and Culture	3
		(b)	COM	310	Intercultural Communication	3
			or			
			COM	320	Diversity and Communication	3
			LIN	471	Sociolinguistics	3

e. **Optional Additional Teaching Endorsements**

Students may elect to complete one or more optional disciplinary teaching minor(s), in addition to the required grade band concentration and English as a Second Language requirements. The following disciplinary teaching minors are available for prospective elementary school teachers.

Arabic	22
Chinese	26
French	24
German	23
Japanese	24
Spanish	24

Requirements for the disciplinary teaching minors can be found in the section *Requirements for the Disciplinary Teaching Minors* in the section on *TEACHER CERTIFICATION*, below. Students wishing to complete one or more of the following optional disciplinary teaching majors, in addition to the grade band concentration and English as a Second Language requirements, should refer to *Teacher Certification Options* in the catalog sections for the colleges, departments, and schools that administer disciplinary majors that are available for teacher certification.

College of Arts and Letters:

- Arabic
- Chinese
- French
- German
- Japanese
- Spanish

Undergraduate Professional Education Course Requirements for Secondary Teacher Certification

				CREDITS
1.	The following Professional Education Courses (20 or 21 credits):			
a.	All of the following courses (20 credits):			
	TE	101	Social Foundations of Justice and Equity in Education	3
	TE	150	Reflections on Learning	3
	TE	302	Learners and Learning in Context - Secondary (W)	4
	TE	407	Teaching of Subject Matter to Diverse Learners - Secondary (W)	5
	TE	408	Crafting Teaching Practices - Secondary (W)	5
	The following course if the teaching major and minor are in different subject matter:			
	TE	409	Crafting Teaching Practices in the Secondary Teaching Minor	1

The pedagogy courses that are required for students with a disciplinary major in music education are specified in the section on *TEACHER CERTIFICATION OPTIONS* in the College of Music section of this catalog. Students with a disciplinary major in music education must complete Teacher Education 150, Teacher Education 250, Teacher Education 302 and Music 277 to be considered for admission to the Music Education student teaching experience. Teacher Education 409 is required if the student pursues a minor. It is not required of the major.

Students with a disciplinary major in art education must complete Studio Art 481 and 482 in lieu of Teacher Education 407 and 408.

Admission to the Internship Year Studies Program

The section on admission to the Internship Year Studies Program pertains to all students who complete the requirements for a bachelor's degree at another educational institution, or who complete the requirements for a bachelor's degree at Michigan State University without having been admitted to the Teacher Certification Program.

The number of students admitted to the Internship Year Studies Program is established by the university. Enrollment in the program is limited. The criteria and procedures for the selection of

students for admission to the Internship Year Studies Program are established by the College of Education.

Requirements for the Internship Year Studies Program

	CREDITS
1. All of the following Professional Education Courses (24 credits):	
TE 501 Internship in Teaching Diverse Learners I	6
TE 502 Internship in Teaching Diverse Learners II	6
TE 801 Professional Roles and Teaching Practice I	3
TE 802 Reflection and Inquiry in Teaching Practice I	3
TE 803 Professional Roles and Teaching Practice II	3
TE 804 Reflection and Inquiry in Teaching Practice II	3
2. For those pursuing optional additional discipline-specific teaching endorsements, one credit of TE 503 must be taken for each additional teaching endorsement earned.	
3. Meet all professional standards for the internship year as specified by the College of Education.	

Students with a music education disciplinary major must complete approved alternative courses in lieu of Teacher Education 501, 502, 801, 802, 803, and 804.

Students with a special education disciplinary major who are seeking both teacher certification and endorsement in learning disabilities must complete Counseling, Educational Psychology and Special Education 502A, 801A, 802A, 803A, and 804A in lieu of Teacher Education 502, 801, 802, 803, and 804. Those courses contain disciplinary content, as well as pedagogical content. Therefore, those courses are also counted toward the requirements for endorsement in the area of learning disabilities. Students who completed Teacher Education 502, 801, 802, 803, and 804 and who are seeking endorsement in learning disabilities must complete Counseling, Educational Psychology and Special Education 502A, 801A, 802A, 803A, and 804A.

Internship Placements

Students seeking teacher certification are required to complete extended internships during the Internship Year Studies Program. Interns who desire to be placed in secondary schools must pass the Michigan Test for Teacher Certification (MTTC) subject tests in their teaching major. Elementary interns, including Special Education and Child Development majors, must pass, at minimum, the MTTC tests appropriate to their grade band concentration. For the full criteria to be admitted to the internship year, see Prerequisites for Admission to the Internship Year Studies Program.

Although students are given an opportunity to express their preferences concerning possible internship placement sites, the placement of students in internships is the sole responsibility of the College of Education. The College will not honor student-arranged internship placements.

Each student's subject areas, the availability of field instructors, the voluntary willingness of schools to accept interns and visitors, and the College's commitment to providing service to public schools are considered in internship placement decisions. Given the number of factors that influence internship placement decisions, the College cannot guarantee that placements will be available in the vicinity of East Lansing or in a location that a student prefers.

Students are responsible for their transportation to and from internships. Students are responsible for costs associated with internships; e.g., moving to and living in the community in which a student's internship placement is located.

For additional information, students should contact the faculty who are responsible for internship placements.

Relationship of the Internship Year Studies Program to Master's Degree Programs

Students may be admitted to the Internship Year Studies Program without being admitted to a master's degree program. Students who are admitted to both the Internship Year Studies Program and a master's degree program may pursue both programs simultaneously and may be allowed to apply 800-level courses from the Internship Year Studies Program to their master's degree with the approval of the units that administer the master's degree program.

Students in any master's program in the College of Education may apply a maximum of 12 credits earned through any combination of courses taken through lifelong education, graduate certification, or in transfer from another institution. Each program may determine if courses are appropriate for the master's program and may allow fewer than 12 credits to be applied to the specific master's program.

For additional information about the 800–level courses that are required for the Internship Year Studies Program, refer to the section on “*Requirements for the Internship Year Studies Program.*”

Effective Fall 2022.

COLLEGE OF ENGINEERING

1. Change the **Admission to the College** statement in the **College of Engineering**. The University Committee on Undergraduate Education (UCUE) approved this request at its January 10, 2022 meeting.

- a. Under the heading **Admission to the College** replace the last paragraph with the following:

Students interested in applying for a degree granting major in the College of Engineering may apply for admission during each semester, and applications will be reviewed after the end of each semester. Students must be admitted to a degree-granting college at the time they have completed 56 credits.

Effective Fall 2022.

2. Establish a **Graduate Certificate in Secure and Connected Cyber-Physical Systems** in the Department of Electrical and Computer Engineering. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its October 18, 2021 meeting.

- c. **Background Information:**

The most recent U.S. Bureau of Labor Statistics 2019-2029 employment projections show that cyber security jobs are expected to grow at more than 8 times the rate for all occupations, about 4 times the rate for all STEM occupations, and more than 2.7 times the rate for all computer occupations. This demand is driven by the need to secure and build trust in a growing digitized economy as more and more consumers and businesses connect devices to the internet and more sensitive data is stored online and in the cloud. The increased demand for cybersecurity has led to academic departments across the nation to develop courses and programs for undergraduate and graduate students to build knowledge in cybersecurity and address the growing demand for cybersecurity-related workers. Federal departments and agencies such as NSF, NIST, DHS, DOE, and DoD emphasize cybersecurity education, training, and workforce development.

The Department of Electrical and Computer Engineering (ECE) within the College of Engineering is well positioned to offer focused training to graduate students on secure and connected cyber-physical systems (CPS), an important part of cybersecurity dealing with the security of networked intelligent devices and systems that have both computational and physical elements. Some CPS application areas include smart grid, autonomous transportation, healthcare, civil infrastructure, manufacturing, and consumer appliances. Courses associated with the certificate are already part of the ECE graduate curriculum.

- d. **Academic Programs Catalog Text:**

The Graduate Certificate in Secured and Connected Cyber-Physical Systems is intended for students with interest in the modeling, design, and analysis of secure and networked cyber-physical systems (CPS). The certificate prepares students for both research work as well for jobs in government and industry in secure and connected CPS, which are growing rapidly.

Requirements for the Graduate Certificate in Secure and Connected Cyber-Physical Systems

	CREDITS
Students must complete all of the following courses (9 credits):	
ECE 816 Cryptography and Network Security	3
ECE 830 Embedded Cyber-Physical Systems	3
ECE 842 Performance Modeling of Communication Networks	3
Students must have a minimum 3.00 grade-point average over the courses applied to the certificate for it to be awarded.	

Effective Summer 2022.

COLLEGE OF NATURAL SCIENCE

1. Delete the curriculum and degree requirements for the **Master of Arts for Teachers** degree in **Mathematics** in the Department of Mathematics. The University Committee on Graduate Studies (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 2020. No students are to be readmitted to the program effective Spring 2020. Effective Fall 2021, coding for the program will be discontinued and the program will no longer be available in the Department of Mathematics. Students who have not met the requirements for the Master of Arts for Teachers Degree in Mathematics through the Department of Mathematics prior to Fall 2021 will have to change their major.
2. Change the requirements for the **Master of Science** degree in **Plant Biology** in the Department of Plant Biology. The University Committee on Graduate Studies (UCGS) approved this request at its January 24, 2022 meeting.
 - a. Under the heading **Requirements for the Master of Science Degree in Plant Biology** make the following changes:
 - (1) In item 1. a. delete the following course:

PLB 804 Frontiers in Plant Biology 2

Effective Fall 2022.

COLLEGE OF SOCIAL SCIENCE

1. Change the **Graduation Requirements for the Bachelor of Arts and the Bachelor of Science** degrees in the **College of Social Science**. The University Committee on Undergraduate Education (UCUE) approved this request at its January 10, 2022 meeting.
 - a. Under the heading **Graduation Requirements for the Bachelor of Arts and Bachelor of Science Degrees in the College of Social Science** make the following changes:
 - (1) In item 4. I. A., replace the first sentence with the following:

All students must complete an experiential learning requirement with a grade of P, S, or 2.0 or higher.
 - (2) In item 4. I. B., add the following second sentence:

No more than two courses offered by a student's major department or school may be counted toward completion of an interdisciplinary minor. In Interdisciplinary Studies in

Social Science, only two courses counting toward the completion of a cognate may count toward the completion of an interdisciplinary minor.

- (3) In 4. I. B. add the following minors:
 Digital Cultural Heritage and History
 Environmental Science and Policy
 Migration Studies
- (4) In item 4.II. A., replace the first sentence with the following:
 All students must complete an experiential learning requirement with a grade of P, S, or 2.0 or higher.
- (5) In item 4. II. B., add the following second sentence:
 No more than two courses offered by a student's major department or school may be counted toward completion of an interdisciplinary minor. In Interdisciplinary Studies in Social Science, only two courses counting toward the completion of a cognate may count toward the completion of an interdisciplinary minor.
- (3) In 4. II. B. add the following minors:
 Digital Cultural Heritage and History
 Environmental Science and Policy
 Migration Studies

Effective Fall 2022.

2. Change the requirements for the **Minor in Asian Pacific American Studies** in the College of Social Science.

a. Under the heading **Requirements for the Minor in Asian Pacific American Studies** make the following changes:

- (1) In item 2., under **Asian Pacific American Studies** add the following courses:

SSC	393	Topics in Asian Pacific American Studies	3
SSC	491	Independent Studies in Asian Pacific Islander Desi American Studies	1 to 3
- (2) In item 2., under **Asian Diaspora** add the following course:

SSC	491	Independent Studies in Asian Pacific Islander Desi American Studies	1 to 3
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- (3) In item 2., under **Asian Studies**, delete the following course:

PSY	493	Issues in Psychology (W)	3
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Add the following courses:

CHS	102	Elementary Chinese II	5
CHS	201	Second-Year Chinese I	5
CHS	202	Second-Year Chinese II	5
CHS	301	Third-Year Chinese I	4
CHS	302	Third-Year Chinese II	4
CHS	350	Studies in Chinese Language	3
CHS	360	Chinese Film Studies	3
CHS	366	Chinese Culture: Tradition and Modernity (W)	3
CHS	401	Fourth-Year Chinese I	3
CHS	402	Fourth-Year Chinese II	3
CHS	410	Chinese Short Stories	3

CHS	411	Advanced Spoken Chinese	3
GEO	337	Geography of Asia-Pacific	3
JPN	102	Elementary Japanese II	5
JPN	201	Second-Year Japanese I	5
JPN	202	Second-year Japanese II	5
JPN	301	Third-year Japanese I	4
JPN	302	Third-year Japanese II	4
JPN	350	Japanese Language in Society	3
JPN	369	Introduction to Japanese Literature and Culture	3
JPN	401	Fourth-year Japanese I	3
JPN	402	Fourth-year Japanese II	3
JPN	431	Advanced Spoken Japanese	3
JPN	441	Japanese Short Stories	3
JPN	451	Advanced Japanese for Japanese Language Proficiency Test Preparation	3
JPN	469	Research Seminar in Japanese Literature and Culture (W)	3
JPN	491	Topics in Japanese Studies	1
KOR	102	Elementary Korean II	4
KOR	201	Intermediate Korean I	4
KOR	202	Intermediate Korean II	4
KOR	301	Intermediate-High Korean I	3
KOR	302	Intermediate-High Korean II	3
KOR	401	Advanced Korean I	3
KOR	402	Advanced Korean II	3
LL	152	First-Year Less Commonly Taught Language II	4
LL	251	Second-Year Less Commonly Taught Language I	4
LL	252	Second-Year Less Commonly Taught Language II	4
LL	301	Third-Year Less Commonly Taught Language I	3
LL	302	Third-Year Less Commonly Taught Language II	3
LL	401	Fourth-Year Less Commonly Taught Language I	3
LL	402	Fourth-Year Less Commonly Taught Language II	3

- (4) Following item 2., replace the notes with the following:

Linguistics and Languages (LL) courses must be in Hindi, Thai, Vietnamese, and Urdu languages only.

With the approval of the Coordinator for Asian Pacific American Studies, students may take a second Asian Pacific American Studies or Asian Diaspora Studies course in place of an Asian Studies course. Students may not use the same course to fulfill the requirement in different areas.

The topic of ISS 335 must contain specific content pertaining to Asian Pacific American Studies and be approved by the Coordinator for Asian Pacific American Studies.

With the advance approval of the Coordinator for Asian Pacific American Studies, other courses and options such as study abroad and study away may be used to fulfill minor requirements.

- (5) In the option following, make the following changes:

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

SSC	393	Topics in Asian Pacific American Studies	3
-----	-----	--	---

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

LL	261	Advanced Less Commonly Taught Language I	4
LL	262	Advanced Less Commonly Taught Language II	4

- (c) Replace the note following item 3. with the following:

Linguistics and Languages (LL) courses must be in Hindi, Thai, Vietnamese, and Urdu languages only.

Effective Summer 2022.

3. Change the requirements for the **Bachelor of Arts** degree in **Criminal Justice**.

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

- (1) Renumber item 3. a. (3) to 3. a. (4) and make the following changes:

- (a) Change the introductory statement to the following:

Nine credits from the following courses with at least two courses at the 400-level. Courses taken to satisfy item (3) cannot be used toward this requirement.

- (b) Delete the following course:

CJ	491	Topics in Criminal Justice	2 to 4
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Add the following course:

CJ	491	Topics in Criminal Justice (W)	3
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- (2) Add the following item 3. a. (3):

One of the following courses:

CJ	424	Crime, Mass Media, and Society (W)	3
CJ	426	Violence Against Women (W)	3
CJ	427	Criminology and Public Policy (W)	3
CJ	430	Advanced Seminar in Policing (W)	3
CJ	465	Critical Issues in Corrections (W)	3
CJ	491	Topics in Criminal Justice (W)	3

Effective Summer 2022.

4. Delete the curriculum and degree requirements for the **Graduate Specialization in Judicial Administration** in the School of Criminal Justice. The University Committee on Graduate Studies (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 2021. No students are to be readmitted to the program effective Fall 2021. Effective Summer 2022, coding for the program will be discontinued and the program will no longer be available in the School of Criminal Justice. Students who have not met the requirements for the Graduate Specialization in Judicial Administration through the School of Criminal Justice prior to Summer 2022 will have to change their major.

5. Change the requirements for the **Graduate Specialization in Security Management** in the School of Criminal Justice. The University Committee on Graduate Studies (UCGS) approved this request at its January 24, 2022 meeting.

a. Under the heading **Requirements for the Graduate Specialization in Security Management** delete item 2.:

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

LIR	823	Organizational Behavior in Labor and Industrial Relations	3
MGT	824	Management and Organizational Behavior	3
PLS	810	Proseminar in Public Administration	3
PSY	860	Industrial and Organizational Psychology	3

Effective Summer 2022.

6. Change the name of the **Bachelor of Arts** degree in **Child Development to Child Development: Birth to Kindergarten and Special Education** in the Department Human Development and Family Studies. The Teacher Education Council (TEC) approved this request at its January 10, 2022 meeting.

Students admitted to the major prior to Fall 2022 will be awarded a Bachelor of Arts Degree in Child Development.

Students admitted to the major Fall 2022 and forward will be awarded a Bachelor of Arts Degree in Child Development: Birth to Kindergarten and Special Education.

Effective Fall 2022.

7. Change the requirements for the **Bachelor of Arts** degree in **Child Development: Birth to Kindergarten and Special Education** in the Department of Human Development and Family Studies. The Teacher Education Council (TEC) approved this request at its January 10, 2022 meeting.

a. Under the heading **Requirements for the Bachelor of Arts Degree in Child Development** replace the entire entry with the following:

1. The University requirements for bachelor's degrees as described in the *Undergraduate Education* section of this catalog; 120 credits, including general elective credits, are required for the Bachelor of Arts degree in Child Development: Birth to Kindergarten and Special Education.

The University's Tier II writing requirement for the Child Development: Birth to Kindergarten and Special Education major is met by completing Human Development and Family Studies 321. This course is referenced in item 3. below.

2. The requirements of the College of Social Science for the Bachelor of Arts degree with the exception of the Interdisciplinary Minor Requirement. In lieu of the minor, students will either complete the requirements for the Teaching Certificate for teaching children prek-3rd grade or select from teacher preparation requirements appropriate to their development as teachers of young children.

3. The following requirements for the major:

			CREDITS	
a.	All of the following courses (52 credits):			
	CEP	240	Diverse Learners in Multicultural Perspective	3
	CEP	451	Models of Special Education Administration and Services	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	1

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	301	Literacy, Learners, and Learning in Context - Elementary	3
TE	405A	Teaching Literacy to Diverse Learners I (PK-3)	3
TE	406A	Teaching Mathematics to Diverse Learners I (PK-3)	3
TE	330	Science Curriculum for Young Learners (PK-3)	3
TE	341	Teaching and Learning of (Bi)Multilingual Learners	

Effective Fall 2022.

8. Establish a **Minor in Resource Management from the Individual, Family, and Societal Perspective** in the Department of Human Development and Family Studies. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its October 7, 2021 meeting.

a. **Background Information:**

There is a need to provide a more intensive look at resource management across the life course, specifically a human service perspective in the resource management field. This will fill a gap to support students looking for resource management skills in non-profit settings. The department of Human Development and Family Studies has in its roots a deep history with Home Economics which includes resource management. The department currently offers two courses in financial literacy and personal finance and one course to majors in family resource management. The department has three faculty that dedicate time in this area of teaching and research and chairs the campus-wide financial literacy initiatives entitled Go for the Green. This group has a multi-year grant and external partnership with Michigan State Federal Credit Union (MSUFCU). Programming from this area includes New Student Orientation and spring semester speaker series and educational events.

b. **Academic Programs Catalog Text:**

The Minor in Resource Management from the Individual, Family, and Societal Perspective provides interdisciplinary knowledge from an ecological perspective, preparing students to manage, counsel, and work in a wide range of placements in human service, non-profit and for-profit sectors. The minor also prepares students to be more literate and capable personal money managers.

The minor is available as an elective to students who are enrolled in bachelor's degree programs in the College of Social Science. With the approval of the department and college that administers 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 their major undergraduate advisor in the College of Social Science.

Requirements for the Minor in Resource Management from the Individual, Family, and Societal Perspective

			CREDITS
Students must complete 15 credits from the following:			
1.	The following course (3 credits):		
	HDFS	238 Personal Finance	3
2.	One of the following courses (3 credits):		
	EC	201 Introduction to Microeconomics	3
	EC	202 Introduction to Macroeconomics	3
	GEO	113 Introduction to Economic Geography	3
	HRLR	316 Economics of Human Capital	3
	SOC	214 Social Inequality	3
	SOC	475 Health and Society	3
	UP	458 Housing and Real Estate Development	3
3.	Two of the following courses (6 or 7 credits):		
	AFRE	265 Ecological Economics	3

	BUS	291	Special Topics: Introduction to Business	3
	CAS	114	Creativity and Innovative Entrepreneurship	3
	CEP	460	Communication Skill Training for the Helping Professional	3
	CSUS	433	Grant Writing and Fund Development	3
	ESHP	190	The Art of Starting	3
	HST	413	Families in Historical Perspective	3
	MGT	325	Management Skills and Processes	3
	PHL	345	Business Ethics	4
	REL	185	Introduction to Religion and Nonprofits	3
	WS	339	Psychology of Women	3
4.	The following capstone course (3 credits):			
	HDFS	438	Applied Resource Management Practicum	3

Effective Fall 2022.

9. Change the requirements for the **Bachelor of Arts** degree in **Public Policy** in the Department of Political Science.

a. Under the heading **Requirements for the Bachelor of Arts Degree in Public Policy** replace the entire entry in item 3. with the following:

- a. All of the following courses (33 credits):
- (1) All of the following courses (10 credits):

PLS	100	Introduction to American Politics	3
PLS	200	Introduction to Political Science	4
PLS	494	Field Experience in Political Science	3
 - (2) One of the following courses (3 or 4 credits):

PLS	201	Introduction to Methods of Political Analysis	4
PLS	202	Introduction to Data Analytics and the Social Sciences	3
 - (3) One of the following courses (3 or 4 credits):

PLS	392	Special Topics in Political Science	3 or 4
PLS	397	Analyzing and Visualizing Data in Politics	3
 - (4) One of the following courses (3 credits):

PLS	310	Public Administration and Policy Making	3
PLS	313	American Public Policy	3

The course used to fulfill this requirement may not be used to fulfill requirement (5) below.
 - (5) Complete a minimum of three of the following courses (9 credits):

PLS	301	American State Government	3
PLS	302	Urban Politics	3
PLS	310	Public Administration and Policy Making	3
PLS	313	American Public Policy	3
PLS	324	Congress	3
PLS	325	The Presidency	3
PLS	331	Political Parties and Interest Groups	3
PLS	342	Comparative Political Economy	3
PLS	362	American Foreign Policy and National Security	3
PLS	363	International and Domestic Political Conflict	3
PLS	364	Politics of the United Nations and International Organizations	3
 - (6) One of the following courses (4 credits):

PLS	422	Seminar in Political Science (W)	4
PLS	481	Undergraduate Research Seminar	4

Effective Summer 2022.

10. Change the requirements for the **Bachelor of Arts** degree in **World Politics** in the Department of Political Science.

a. Under the heading **Requirements for the Bachelor of Arts Degree in World Politics** replace the entire entry in item 3. with the following:

- a. All of the following courses (33 credits):
- (1) All of the following courses (10 credits):

	PLS 140	Introduction to Comparative Politics	3
	PLS 160	Introduction to International Relations	3
	PLS 200	Introduction to Political Science	4
 - (2) One of the following courses (3 or 4 credits):

	PLS 201	Introduction to Methods of Political Analysis	4
	PLS 202	Introduction to Data Analytics and the Social Sciences	3
 - (3) One of the following courses (3 or 4 credits):

	PLS 392	Special Topics in Political Science	3 or 4
	PLS 397	Analyzing and Visualizing Data in Politics	3
 - (4) Complete a minimum of four of the following courses (12 credits):

	PLS 342	Comparative Political Economy	3
	PLS 344	Politics of Developing Areas	3
	PLS 345	Religion and World Politics	3
	PLS 346	Middle East Politics	3
	PLS 347	Democratic Regimes	3
	PLS 351	African Politics	3
	PLS 352	Latin American Politics	3
	PLS 354	Politics of Asia	3
	PLS 356	Politics of Europe and the European Union	3
	PLS 357	Politics of English Speaking Democracies	3
	PLS 358	Politics of the U.S.S.R. and Its Successor States	3
	PLS 362	American Foreign Policy and National Security	3
	PLS 363	International and Domestic Political Conflict	3
	PLS 364	Politics of the United Nations and International Organizations	3
 - (5) One of the following courses (4 credits):

	PLS 422	Seminar in Political Science (W)	4
	PLS 481	Undergraduate Research Seminar	4

Effective Summer 2022.

11. Change the requirements for the **Master of Social Work** degree with majors in **Clinical Social Work, Clinical Social Work-Advanced Standing, Organization and Community Leadership, and Organization and Community Leadership-Advanced Standing** in the School of Social Work. The University Committee on Graduate Studies (UCGS) approved this request at January 24, 2022 meeting.

a. Under the heading **Admission to the Master of Social Work Degree Program**, in paragraph three, change item 1. to “Live more than 30 miles from the East Lansing campus”.

b. Under the heading **Admission to the Advanced Standing Master of Social Work Degree Program**, in paragraph four, change item 1. to “Live more than 30 miles from the East Lansing campus”.

c. Under the heading **Requirements for the Advanced Standing Master of Social Work Program** make the following changes:

- (1) Change the total credits from ‘38’ to ‘36”
- (2) Under the heading **Clinical Social Work-Advanced Standing** change the total credits from ‘32’ to ‘26’ and delete the following courses:

	SW 812B	Integration of Theory, Policy, and Evaluation in Social Work	2
	SW 842B	Advanced Generalist Social Work Practice Methods	2

- | | | | | |
|--|----|------|---|---|
| | SW | 893B | Social Work Field Education: Graduate Advanced
Generalist Practice | 2 |
|--|----|------|---|---|
- (3) Under the heading ***Clinical Social Work-Advanced Standing***, in item 2., change the credits from '6' to '10'.
- (4) Under the heading ***Organization and Community Leadership-Advanced Standing*** change the total credits from '29' to '23' and delete the following courses:
- | | | | | |
|--|----|------|---|---|
| | SW | 812B | Integration of Theory, Policy, and Evaluation in Social Work | 2 |
| | SW | 842B | Advanced Generalist Social Work Practice Methods | 2 |
| | SW | 893B | Social Work Field Education: Graduate Advanced
Generalist Practice | 2 |
- (5) Under the heading ***Organization and Community Leadership-Advanced Standing***, in item 2., change the credits from '6' to '10'.

Effective Summer 2022.

12. Delete the curriculum and degree requirements for the **Disciplinary Teaching Minor in Sociology**, available for secondary certification, in the Department of Sociology. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Spring 2021. No students are to be readmitted to the program effective Spring 2021. Effective Spring 2022, coding for the program will be discontinued and the program will no longer be available in the Department of Sociology. Students who have not met the requirements for the Disciplinary Teaching Minor in Sociology through the Department of Sociology prior to Spring 2022 will have to change their minor.

COLLEGE OF VETERINARY MEDICINE

1. Change the requirements for the **Doctor of Veterinary Medicine** degree in **Veterinary Medicine** in the College of Veterinary Medicine. The University Committee on Graduate Studies (UCGS) approved this request at its January 24, 2022 meeting.
- a. Under the heading **Admission to the Professional Program in Veterinary Medicine** replace paragraph seven with the following:
- All prerequisite courses must be completed by the spring semester of the year of matriculation with a minimum grade of 2.0 in each course. One hundred percent of the science prerequisite courses must be complete at the time of application, with a minimum grade of 2.0 in each course.

Effective Fall 2022.

PART II - NEW COURSES

DEPARTMENT OF ART, ART HISTORY, AND DESIGN

- STA 491C Selected Topics - Ceramics
Spring of every year. 2 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: STA 345
- REINSTATEMENT Issues of technique, style, and content in ceramics.
Effective Fall 2022

COLLEGE OF ARTS AND LETTERS

- AL 460 Advanced Career Strategies
Fall of every year. Spring of every year. 1(1-0) A student may earn a maximum of 1 credit in all enrollments for this course. RB: Completion of AL 250 or basic level of career readiness/preparation prior to enrollment. R: Open to undergraduate students in the College of Arts and Letters.
Final career preparation efforts, such as job search strategies, interviewing tips, assessing work-life fit, and negotiation strategies. Reflection and articulation of relevant skills and experiences through the creation of professional documents, and portfolios.
Effective Fall 2022
- JS 493 Jewish Studies Internship
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: Approval of department.
Practical experience applying Jewish Studies skills or Israel Studies skills in various professional experiences.
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 2022

THE ELI BROAD COLLEGE OF BUSINESS

- BUS 104 Introduction to Business; a Multicultural Experience
Fall of every year. 3(3-0) R: Open to freshmen in the Eli Broad College of Business and The Eli Broad Graduate School of Management or in the Business - Admitted major or in the Business-Preference major.
Introduction to business and communication skills necessary to compete successfully in a globally diverse environment. Focuses on transitional issues related to college. Cultural diversity and thriving in a multicultural environment.
Effective Fall 2022
- BUS 109 Introduction to Business in a Digital Society
Fall of every year. 3(3-0) R: Open to freshmen or sophomores.
A multidisciplinary approach introducing students to the world of business. Digital society, blockchain, industrial internet, artificial intelligence, machine learning, deep learning, augmented reality, and virtual reality. Staying relevant in a global marketplace.
Effective Fall 2022

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

- CE 800 Structural Dynamics
Fall of every year. 2(2-0)
Dynamic response of single degree-of-freedom systems. Damping in structure and soils. Time and frequency domain methods. Analytical and numerical techniques. Earthquake response spectra. Classical and finite element formulation.
Effective Spring 2022

- CE 839 Smart Materials and Structures
Spring of even years. 3(3-0) RB: CE 407 and CE 804
This course provides an introduction to the field of smart materials and structures. The content focuses on the characteristics of different types of smart materials, their properties, and constituent behavior.
Effective Spring 2022

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

- EAD 364 Political Economy of Educational Opportunity
Fall of every year. Spring of every year. 3(3-0) RB: TE 201
Macroeconomic policies, economic dynamics, and broader social structures outside of schools that shape the landscape of educational opportunity for students in the U.S.
Effective Spring 2022

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

- ECE 855 Non-cooperative Game Theory
Fall of even years. 3(3-0)
Elements of a game, zero-sum games, non-zero-sum games, dynamic games, stochastic games
Effective Fall 2022
- ECE 858 Networked Control Systems
Fall of every year. 3(3-0) P: ECE 851
Fundamentals on dynamics, estimation, and control of network systems, algebraic graph theory, multi-agent coordination.
Effective Fall 2022

DEPARTMENT OF FINANCE

- FI 475 Behavioral Finance
Spring of every year. 3(3-0) P: FI 312 or FI 321 or approval of department R: Open to students in the Eli Broad College of Business and The Eli Broad Graduate School of Management and open to students in the Financial Planning and Wealth Management Minor and open to students in the Insurance and Risk Management Minor.
Examination of the effect of cognitive and psychological biases on financial decision-making. Analysis of the related consequences for market prices, investor performance, and corporate management.
Effective Spring 2023
- FI 492 Additional Topics in Finance
Fall of every year. Spring of every year. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open to juniors or seniors in the Eli Broad College of Business and The Eli Broad Graduate School of Management or approval of department.
Current and emerging issues in finance to supplement and enrich existing courses.
Effective Fall 2022
- FI 875 Behavioral Finance I
Spring of every year. 1 to 3 credits. P: FI 850 or approval of department R: Open to graduate students in the Business - Admitted major.
Examination of the effect of cognitive and psychological biases on financial decision-making. Analysis of the related consequences for market prices, investor performance, and corporate management.
Effective Spring 2023

FI 876 Behavioral Finance II
Spring of every year. 1 to 3 credits. P: FI 875 or approval of department R: Open to graduate students in the Business - Admitted major.
Advanced examination of the effect of cognitive and psychological biases on financial decision-making. Analysis of the related consequences for market prices, investor performance, and corporate management.
Effective Spring 2023

DEPARTMENT OF FORESTRY

FOR 861 Applied Urban Forest Management
Fall of every year. 3(3-0) RB: FOR 461
Applications of software for integrated planning and management of urban forest resources.
Effective Fall 2022

DEPARTMENT OF HISTORY

HST 254 Migrations in History
Spring of every year. 3(3-0)
REINSTATEMENT Introduction to human mobility in historical perspective. Settlement, diaspora, refugees, urbanization, integration. Considerations of ethnicity, gender and race.
Effective Spring 2022

HST 307 Labor History of the United States to 1863: Making a North American Working Class
Fall of every year. 3(3-0)
Lives, agency, organization and activism of the diverse population of working people.
Effective Fall 2022

HST 308 Labor History of the United States since 1863: Modern Labor and Working-Class History
Spring of every year. 3(3-0)
Lives, agency, organization and activism of the diverse population of working-class people in the United States from the start of the modern industrial age to the present.
Effective Spring 2023

DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY STUDIES

HDFS 805 Early Childhood Education and Care I: History, Child Development, and Equity
Fall of every year. 3(3-0) R: Open to graduate students. Approval of department.
Research on young children (birth to five) including demographics, developmental domains, early brain development, and social inequalities that shape child outcomes; and the central issues that drive both cross-disciplinary research and policy in early childhood
Effective Fall 2022

HDFS 806 Early Childhood Education and Care II: Examining Practices, Policies, and Key Issues
Fall of every year. 3(3-0) P: HDFS 805 R: Open to graduate students. Approval of department.
Early Child Education and Care (ECEC) practice and policy, roles of families and policymakers in altering practices and policies; analysis of critical forces shaping contemporary ECEC; and theories on organizing services to achieve quality, equity, sustainability, and efficiency.
Effective Fall 2022

HDFS 807 Early Childhood Education and Care Policy III: Theory, Analysis, and Research
Spring of every year. 3(3-0) P: HDFS 805 R: Open to graduate students. Approval of department.
Research and analysis at each stage of the policy cycle: agenda setting, formulation, adoption, implementation, evaluation, and termination or change of policy. Theories and frameworks applied to real-world examples provide opportunities to examine different analytic approaches.
Effective Fall 2022

HDFS 808 Early Childhood Education and Care Policy IV: Policy Leadership and Policy Advocacy
Fall of every year. 3(3-0) P: HDFS 805 R: Open to graduate students. Approval of department.
Fundamentals of policy creation, design, and development, focusing on how ECEC policy
is constructed at federal, state, and local levels, and how ECEC programs are funded.
Critical roles of communication, advocacy, and ethics as policy evolves.
Effective Fall 2022

CENTER FOR INTEGRATIVE STUDIES IN ARTS AND HUMANITIES

IAH 207A Race and Identity in Film and Media (D)
Fall of every year. Spring of every year. Summer of even years. 4(2-3) P: (WRA 1004) or
designated score on English Placement test RB: Completion of Tier I Writing Requirement
The production of racial identity through film and other media. Approaches and materials
from literature, philosophy, the arts, religion, and history. Selected themes and issues,
variable by term.
Effective Fall 2022

JAMES MADISON COLLEGE

MC 342 Social Economics of the Workplace: Class, Race, and Gender
Spring of every year. 4(3-0) P: ((EC 201 or concurrently) or (EC 251H or concurrently)) or
completion of Tier I writing requirement R: Open to students in the James Madison College or
approval of college.
REINSTATEMENT Labor market analysis of wages and employment. Class, gender, and race in the
workplace. Productivity, income distribution, and living standards. Systems of work
organization. Impact of globalization and new technology. The changing role of unions.
Effective Fall 2022

MSU COLLEGE OF LAW

LAW 572J IRS Practice and Procedure
On Demand. 0 to 6 credits. P: LAW 501K or concurrently R: Open to students in the MSU College
of Law.
Practical application of IRS practices and procedures to common tax problems.
Procedures from initial audit through appeals and judicial review.
Effective Fall 2022

LAW 580B Supreme Court Seminar
On Demand. 0 to 6 credits. P: LAW 500F and LAW 500G and LAW 500R and LAW 530A and LAW
530B and LAW 530J and LAW 530K and LAW 530S RB: The first-year curriculum should have
been completed, including Constitutional Law and the Regulatory State. Constitutional Law II and
Administrative Law are recommended but not required. R: Open to Law students.
Significant issues pending before the Supreme Court of the United States during the
current term. Place of the Supreme Court in our governmental system, including the
appropriate role of judicial review in a constitutional democracy.
Effective Spring 2023

DEPARTMENT OF LINGUISTICS, LANGUAGES AND CULTURES

LLT 362 Child Second Language Learning
Fall of every year. Spring of every year. 3(3-0) P: LIN 200 or LIN 401 or ENG 302 RB: Some
familiarity with linguistic concepts.
REINSTATEMENT Basic principles of child second language learning and socialization. Simultaneous
bilingualism, differences between child first and second language learning. Effects of age
and individual and social factors in second language learning. Interaction and language
learning, and loss of a first language. Classroom language learning in mainstream,
immersion, bilingual, and heritage language classrooms.
Effective Spring 2023

DEPARTMENT OF MARKETING

- MKT 878 The Customer-Centric Organization
Fall of every year. Spring of every year. Summer of every year. 2(2-0) R: Approval of department.
Characteristics of and steps necessary in becoming a customer-centric organization, and the roles that vision, mission, values, leadership alignment, and effective customer experience governance play in that process.
Effective Summer 2022
- MKT 879 Organizational Development and Change
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 878 R: Approval of department.
Processes in which an organization changes its structure, strategies, operational methods, technologies and organizational culture and climate to become more customer-centric.
Effective Summer 2022
- MKT 880 Consumer Decision Making and Behavior
Fall of every year. Spring of every year. Summer of every year. 2(2-0) R: Approval of department.
Concepts, theories, and principles from the various behavioral sciences to understand factors influencing the acquisition, consumption, and evaluation of customer experiences and relationships with experience providing organizations.
Effective Summer 2022
- MKT 881 Qualitative Research
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 880 R: Approval of department.
Qualitative research methods for understanding customer and employee needs, desires, and factors inhibiting an organization's ability to deliver.
Effective Summer 2022
- MKT 883 Qualitative Data Synthesis and Analysis
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 881 R: Approval of department.
Tools and techniques to synthesize and analyze qualitative data relative to the customer and employee and their journeys, including jobs to be done, empathy mapping, customer personas, and journey mapping.
Effective Summer 2022
- MKT 885 Experience Analytics
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 883 R: Approval of department.
Tools and techniques to identify and rectify underlying processes, behaviors, and technologies that inhibit an organization's ability to effectively deliver a positive experience.
Effective Summer 2022
- MKT 886 Human Centered Design and Innovation
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 885 R: Approval of department.
Adopting an empathic and solutions-based process, mindset, and approach to creative problem solving and design.
Effective Summer 2022
- MKT 887 Customer Experience Strategy
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 886 R: Approval of department.
Focus on key business outcomes and metrics. Development and alignment of customer experience strategies.
Effective Summer 2022

- MKT 888 Customer Experience Design
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 887 R: Approval of department.
Utilizing personas, journey maps, storyboards, and service design tools to create impactful customer experiences in the physical and digital realms.
Effective Summer 2022
- MKT 889 Digital Customer Experience Design
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 888 R: Approval of department.
Unique aspects of the online user experience and design of the digital experience.
Effective Summer 2022
- MKT 892 The Employee Experience
Fall of every year. Spring of every year. Summer of every year. 2(2-0) R: Approval of department.
Recruitment, selection, onboarding, and socialization of employees in customer-centric organizations.
Effective Summer 2022
- MKT 893 Employee Engagement
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 892 R: Approval of department.
Theories and principles of employee engagement, motivation, leadership, and internal communication.
Effective Summer 2022
- MKT 895 Customer Relationship Management
Fall of every year. Spring of every year. Summer of every year. 2(2-0) R: Approval of department.
Examines the lifetime value of the customer, customer experience lifecycle, and managing customer relationships over time.
Effective Summer 2022
- MKT 896 Measuring the Experience
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 888 R: Approval of department.
Developing effective Voice of the Customer (VoC) and Voice of the Employee (VoE) systems.
Effective Summer 2022
- MKT 897 Data Analysis, Integration and Visualization
Fall of every year. Spring of every year. Summer of every year. 2(2-0) P: MKT 896 R: Approval of department.
Centralized analysis, integration and visualization of data for use in customer and employee experience decision making.
Effective Summer 2022

DEPARTMENT OF MEDIA AND INFORMATION

- UX 800 User Research and Design
Fall of every year. Spring of every year. 3(3-0) R: Open to master's students in the Department of Media and Information. Approval of department.
History and overview of user research and user experience as a profession. Methods for understanding the needs and experiences of potential users of new technologies, and translating those into realistic design ideas, suggestions, and requirements that can serve as a basis for the creation of new technologies. Low-fidelity prototyping, gathering initial user feedback, and iterating on design ideas.
Effective Fall 2022

- UX 802 Current Topics in UX
On Demand. 3(3-0) R: Open to master's students in the Department of Media and Information.
Approval of department.
Cultural, technological, and design evolution of UX/UI. Critical examination of empirical research concerning social impacts of UX/UI. Focus on special issues and considerations related to new user interface modalities and application areas.
Effective Fall 2022
- UX 805 Quantitative Analysis and Insights for UX
Fall of every year. 3(3-0) P: UX 800 or concurrently R: Open to master's students in the Department of Media and Information. Approval of department.
Appropriate statistical models for UX research questions. Bivariate and multivariate techniques including various types of regression models to investigate and answer research questions in the field UX and communicate these quantitative results to both technical and nontechnical audiences. Data cleaning and manipulation.
Effective Fall 2022
- UX 810 Social Science for Design
Fall of every year. 3(3-0) P: UX 800 or concurrently R: Open to master's students in the Department of Media and Information. Approval of department.
Social science theories and concepts important for designing systems and user interfaces that people will be able to use efficiently, effectively and enjoyably.
Effective Fall 2022
- UX 815 Programming Fundamentals for UX
Spring of every year. 3(3-0) P: UX 800 or concurrently R: Open to master's students in the Department of Media and Information. Approval of department.
Fundamentals of programming in a team environment. Basic foundations in how to write computer programs, work with others to program computers, and move beyond simple programs to large-scale, professional software development.
Effective Spring 2023
- UX 820 Usability Evaluation
Spring of every year. 3(3-0) P: UX 800 or concurrently R: Open to master's students in the Department of Media and Information. Approval of department.
Plan, conduct, analyze, and report on usability evaluations of technology interfaces, products and applications, using methods that incorporate human participants and methods that do not.
Effective Spring 2023
- UX 825 Visual Design Fundamentals
Summer of every year. 3(3-0) P: UX 800 or concurrently R: Open to master's students in the Department of Media and Information. Approval of department.
Visual design software and processes, including aesthetics of typography, color, and iconography for user interfaces.
Effective Summer 2023
- UX 830 Design for Interactivity
Summer of every year. 3(3-0) P: UX 800 or concurrently R: Open to master's students in the Department of Media and Information. Approval of department.
Process of designing and implementing interactive computing systems.
Effective Summer 2023
- UX 835 Accessibility and Design
Summer of every year. 3(3-0) P: UX 800 or concurrently R: Open to master's students in the Department of Media and Information. Approval of department.
Designing, developing, and evaluating inclusive technologies for all individuals with different human abilities and disabilities.
Effective Summer 2023

- UX 840 UX and Society
Summer of every year. 3(3-0) P: UX 800 or concurrently R: Open to master's students in the Department of Media and Information. Approval of department.
Develop core understanding and analysis techniques of dominant theories that situate technology in society across fields of Human Computer Interaction, Science & Technology Studies and Computer Supported Cooperative Work.
Effective Summer 2023
- UX 898 UX Capstone
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to master's students in the Department of Media and Information. Approval of department.
Conduct team-based capstone project from initial idea through high-fidelity prototype. Navigating project management, team-building, and budgeting in the context of UX design and research. Portfolio development.
Effective Summer 2023

COLLEGE OF OSTEOPATHIC MEDICINE

- OST 594 Spirituality and Osteopathic Medicine
Fall of every year. Spring of every year. 1(1-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to osteopathic medicine students in the College of Osteopathic Medicine.
An introduction to the role of spirituality in osteopathic philosophy.
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 2022

DEPARTMENT OF PLANT, SOIL AND MICROBIAL SCIENCES

- CSS 203 World of Soils
Fall of every year. Spring of every year. 2(2-0) Not open to students with credit in CSS 210.
Importance of soils in all ecosystems focusing on agriculture and urban landscapes.
Effective Spring 2022
- CSS 460 Plant-Microbe Interactions
Spring of every year. 3(3-0) P: CSS 360 or MMG 301 or approval of department
Plant responses to the surrounding microbial communities, including pathogens and mutualists. Evaluation of the role of microbial communities in plant health
Effective Spring 2022
- CSS 485 Physiology in Plant Nutrition
Spring of every year. 3(3-0) Interdepartmental with Horticulture. P: PLB 301 or HRT 361 or approval of department
Nutrient uptake, transport and storage in plants. Regulation of nutrient homeostasis in crop plants and genetic variation in plant nutrition.
Effective Summer 2021
- CSS 898 Master's Research
Fall of every year. Spring of every year. Summer of every year. 1 to 6 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to graduate students in the Crop and Soil Sciences major. Approval of department; application required.
Scholarly project for non-thesis (Plan B) master's degree
Request the use of the Pass-No Grade (P-N) system.
Effective Fall 2021
- PLP 105L Fundamentals of Applied Plant Pathology Lab
Spring of every year. 1(0-2) R: Open to students in the Agricultural Industries Major. C: PLP 105 concurrently.
Identification of disease signs and symptoms in major agronomic and horticultural plants. Disease management techniques.
Effective Spring 2023

PLP 898 Master's 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. R: Open to graduate students in the Plant Pathology major. Approval of department; application required.
Scholarly project for non-thesis (Plan B) master's degree
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 2022

DEPARTMENT OF PSYCHOLOGY

PSY 845 Advanced Topics in Social/Personality Psychology
Fall of every year. 3(3-0) A student may earn a maximum of 24 credits in all enrollments for this course. R: Approval of department.
Emerging themes and cornerstone readings in social and personality psychology. Critical emerging areas, recent transformations, and new interpretations of existing topics, including social information processing, intra- and inter-individual behavior, advanced methodological and statistical practice.
Effective Fall 2022

DEPARTMENT OF RELIGIOUS STUDIES

REL 102 Exploring Spirituality
Fall of even years. 3(3-0) R: Not open to seniors.
Transdisciplinary exploration of spirituality, including religiously-affiliated, faith-based, nature-oriented, experiential, and secular. Spirituality, appropriation, and transnational meanings.
Effective Fall 2022

REL 206 Spirituality, Belonging, and the Quest for Purpose
Spring of odd years. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Not open to seniors.
Secular spirituality. Spiritual but not Religious. Spiritual practices, wellness, and mindfulness. Spirituality, meaning-making, and the cultivation of belonging. Spirituality and the Environment.
Effective Fall 2022

REL 345 Religions of South Asia
Spring of odd years. 3(3-0) P: Completion of Tier I Writing Requirement R: Not open to freshmen.
REINSTATEMENT Historical, philosophical, and doctrinal development of Hinduism, Jainism, Buddhism, North Indian Islam, and Sikhism.
Effective Summer 2022

DEPARTMENT OF SUPPLY CHAIN MANAGEMENT

SCM 465 Applying a Lean Methodology to Drive Organizational Efficiency
On Demand. 1(1-0) P: SCM 372 or concurrently R: Open to juniors or seniors in the Department of Supply Chain Management.
Advanced aspects of supply continuity and supply risk, environmentally friendly manufacturing, total quality management, supply chain metrics, electronic markets, relationship management, interfaces with research and development, innovation and other current issues in supply chain management.
Effective Spring 2022

SCM 865 Applying a Lean Methodology to Drive Organizational Efficiency
On Demand. 1(1-0) R: Open to MBA students.
Advanced aspects of supply continuity and supply risk, environmentally friendly manufacturing, total quality management, supply chain metrics, electronic markets, relationship management, interfaces with research and development, innovation and other current issues in supply chain management.
Effective Spring 2022

COLLEGE OF SOCIAL SCIENCE

- SSC 391 Asian Pacific Islander Desi American Experiences in Business
Fall of every year. 1 to 3 credits. Not open to students with credit in MGT 391.
Diverse Asian Pacific Islander Desi American (APIDA) experiences in business and entrepreneurship; challenges and opportunities that APIDA businesspersons encounter in national and global contexts; historical and contemporary origins of APIDA contributions to entrepreneurship.
Effective Fall 2022
- SSC 393 Topics in Asian Pacific American Studies
Spring of every year. 3(3-0)
Diverse Asian Pacific Islander Desi American (APIDA) experiences and their historical and contemporary meanings in America and the Asian Diaspora. Readings include scholarly, journalistic, creative writings, as well as documentaries, films, and digital resources.
Effective Spring 2023
- SSC 491 Independent Studies in Asian Pacific Islander Desi American Studies
On Demand. 1 to 3 credits.
Diverse topics related to Asian Pacific Islander Desi Americans (APIDA) in both historical and contemporary contexts. Readings include scholarly, artistic, and journalistic accounts about and/or by APIDA people and communities selected in consultation with instructor.
May include a community-engagement and -research activity.
Effective Fall 2022

PART III – COURSE CHANGES

DEPARTMENT OF ADVERTISING AND PUBLIC RELATIONS

- ADV 431 Monitoring and Measuring Social Media of Brands
Fall of every year. Spring of every year. 3(3-0) ~~P: ADV 420 R: Open to students in the Department of Advertising and Public Relations or in the Sports Business Management Minor.~~ 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.
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 2017~~ Effective Spring 2022
- ADV 432 Digital Media Planning and Buying
Fall of every year. Spring of every year. 3(3-0) ~~P: ADV 420~~ P: ADV 205 and MKT 327 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.
~~Effective Fall 2015~~ Effective Spring 2022
- ADV 433 Internet Video Promotion Strategy
Fall of every year. Spring of every year. 3(3-0) ~~P: ADV 420~~ 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 2015~~ Effective Spring 2022
- ADV 455 Intensive Portfolio Workshop
Summer of every year. 1 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course. P: ADV 322 and ADV 326 and ADV 354 R: Open to juniors or seniors. Approval of department; application required.
Create portfolio works across various platforms (print and screen) that meet current industry standards. Teams of student art directors and copywriters collaborate to generate advertising solutions.
DELETE COURSE
Effective Fall 2022
- ADV 493 ~~Advertising and Public Relations Internship~~
Advertising Internship
Fall of every year. Spring of every year. ~~1 to 12 credits.~~ 1 to 15 credits. ~~A student may earn a maximum of 12 credits in all enrollments for this course.~~ A student may earn a maximum of 15 credits in all enrollments for this course. P: ADV 205 R: Open to undergraduate students in the Department of Advertising and Public Relations. Approval of department; application required.
Supervised experience in a professional environment.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Spring 2018~~ Effective Fall 2022

DEPARTMENT OF AGRICULTURAL, FOOD, AND RESOURCE ECONOMICS

- AFRE 303 Managerial Economics
Fall of every year. Spring of every year. 3(3-0) ~~P: (MTH 124) and AFRE 203 and EC 201 and (STT 200 or STT 201 or STT 316)~~ P: {(AFRE 203) and EC 201} and (STT 200 or STT 201 or STT 315)
Managerial economics with applications focusing on agriculture, food, and resources issues.
SA: ABM 303
~~Effective Fall 2021~~ Effective Fall 2022

BIOMEDICAL LABORATORY DIAGNOSTICS PROGRAM

- BLD 805 Communication in the Sciences
Fall of every year. ~~Summer of every year.~~ 2(2-0)
Professional communication in clinical laboratory science, including article and proposal writing, thesis writing, posters, and presentations.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
~~Effective Summer 2015~~ Effective Spring 2022

DEPARTMENT OF CHEMICAL ENGINEERING AND MATERIALS SCIENCE

- CHE 872 Polymers and Composites: Manufacturing, Structure and Performance
Spring of even years. 3(3-0) ~~Interdepartmental with Materials Science and Engineering. R: Open only to graduate students in the College of Engineering or the Department of Chemistry.~~ R: Open to graduate students in the College of Engineering or in the Department of Chemistry.
Structure-Property Relations of Polymers, Fibers, Fabrics and Composites, Material Selection, Manufacturing Processes, Process Induced Microstructure, Prediction of Composite Mechanical Properties, Dimensional Stability, Design of Cure Cycles, Mold Design.
~~Effective Spring 2000~~ Effective Fall 2022
- CHE 972 Viscoelasticity and Flow of Polymeric Materials
Spring of odd years. 3(3-0) ~~Interdepartmental with Materials Science and Engineering. RB: MSE 876 R: Open to graduate students in the College of Engineering or approval of department.~~
Time dependent and steady flow properties of polymeric materials related to molecular and structural parameters. Examples of polymeric blends and composites with thermoplastic and thermoset components.
~~Effective Spring 2021~~ Effective Fall 2022
- MSE 801 Foundations of Materials Science and Engineering
Summer of every year. 3(3-0) ~~RB: Undergraduate degree in science or engineering related to Materials Science.~~ RB: Students who are considering a graduate degree in materials science and engineering but do not have an undergraduate degree in materials science and engineering
Structure-Property-Processing-Performance interrelationship of metals, ceramics and polymers. Phase diagrams, thermomechanical treatments, physical and mechanical properties, processing, diffusion, microstructure studies, environmental effects.
~~Effective Summer 2021~~ Effective Summer 2022
- MSE 876 Advanced Polymeric Materials
Fall of even years. 3(3-0) ~~Interdepartmental with Chemical Engineering. RB: At least one semester of undergraduate level course in Polymeric Materials. R: Open to graduate students in the College of Engineering or approval of department.~~
Advanced topics in polymer structure and properties. Thermoplastics, thermosets, polyblends and elastomers. Processing techniques. Deformation and mechanical properties. Thermal, optical and chemical properties. Composites.
SA: MSM 876
~~Effective Fall 2002~~ Effective Fall 2022

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

- CE 802 Introduction to Dynamics and Earthquake Engineering
Fall of every year. 2 credits. RB: MSM 306 Not open to students with credit in ME 461.
Dynamic response of single degree-of-freedom systems. Damping in structures and soils. Time domain and frequency domain methods. Analytical and numerical solution techniques. Earthquake response spectra.
DELETE COURSE
Effective Spring 2022

CE 803 Structural Dynamics
Fall of every year. 1(1-0) C: CE 802 concurrently.
Dynamic analysis of beam, frame and truss structures. Classical and finite element formulations. Model analysis and numerical integration techniques. Response to earthquakes. Computing response using a finite element program.
DELETE COURSE
Effective Spring 2022

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CSE 232 Introduction to Programming II
Fall of every year. Spring of every year. Summer of every year. 4(3-2) P: (CSE 231 or CMSE 202) and (LB 118 or MTH 124 or MTH 132 or MTH 152H)
Continuation of object-centered design and implementation in C++. Building programs from modules. Data abstraction and classes to implement abstract data types. Static and dynamic memory allocation. Data structure implementation and algorithm efficiency. Lists, tables, stacks, and queues. Templates and generic programming.
SA: CSE 330
~~Effective Fall 2017~~ Effective Fall 2022

CSE 260 Discrete Structures in Computer Science
Fall of every year. Spring of every year. Summer of every year. 4(5-0) P: MTH 133 or MTH 126 or MTH 153H or LB 119
Propositional and first order logic. Equivalence and methods of proof. Basics of counting. Set operations, relations, functions. Grammars and finite state automata. Discrete probability. Applications to computer science and engineering.
SA: CPS 260
~~Effective Fall 2018~~ Effective Fall 2022

CSE 290 Independent Study in Computer Science
Fall of every year. Spring of every year. Summer of every year. 1 credit. A student may earn a maximum of 3 credits in all enrollments for this course. R: Approval of department; application required.
Supervised individual study in an area of computer science.
SA: CPS 290
~~Effective Spring 2014~~ Effective Fall 2022

CSE 320 Computer Organization and Architecture
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: CSE 232 and CSE 260 R: Open to students in the Department of Computer Science and Engineering or in the Computer Engineering Major or in the Lyman Briggs Computer Science Coordinate Major or in the Lyman Briggs Computer Science Major or in the Computer Science Disciplinary Teaching Minor. Not open to students with credit in ECE 331.
Boolean algebra and digital logic. Combinational and sequential circuits. Representations of data and instructions. Architecture and major components of computer systems. Assembly language programming and interfacing to high level languages. Assembler and linker processing.
SA: CPS 320
~~Effective Spring 2014~~ Effective Fall 2022

CSE 490 Independent Study in Computer Science
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 to students in the Computer Engineering Major or in the Computer Science Major. Approval of department; application required.
Supervised individual study in an area of computer science.
SA: CPS 490
~~Effective Fall 2016~~ Effective Fall 2022

- CSE 498 Collaborative Design (W)
Fall of every year. Spring of every year. 4(2-4) P: ~~(CSE 402 or CSE 415 or CSE 422 or CSE 431 or CSE 440 or CSE 450 or CSE 471 or CSE 476 or CSE 477 or CSE 482) and (CSE 402 or CSE 420 or CSE 425 or CSE 435 or CSE 440 or CSE 460 or CSE 472 or CSE 477 or CSE 480 or CSE 482) and (CSE 335 and completion of Tier I writing requirement) and (CSE 325 or CSE 410) P: (CSE 402 or CSE 415 or CSE 422 or CSE 431 or CSE 440 or CSE 450 or CSE 471 or CSE 476 or CSE 477 or CSE 482) and (CSE 402 or CSE 420 or CSE 425 or CSE 435 or CSE 440 or CSE 460 or CSE 472 or CSE 477 or CSE 480 or CSE 482) and ((CSE 300 and CSE 325 and CSE 335) and completion of Tier I writing requirement) R: Open to students in the Computer Science Major or in the Lyman Briggs Computer Science Coordinate Major.~~
Development of a comprehensive software and/or hardware solution to a problem in a team setting with emphasis on working with a client. Participation in a design cycle including specification, design, implementation, testing, maintenance, and documentation. Issues of professionalism, ethics, and communication. Development of a comprehensive software and/or hardware solution to a problem in a team setting with emphasis on working with a client. Participation in a design cycle including specification, design, implementation, testing, maintenance, and documentation. Issues of professionalism, ethics, and communication. Students may be asked to sign a non-disclosure agreement (“NDA”) or an assignment of intellectual property rights (“IP Assignment”) to work with some project sponsors.
SA: CSE 449, CSE 478, CSE 479
~~Effective Fall 2019~~ Effective Fall 2022

DEPARTMENT OF COUNSELING, EDUCATIONAL PSYCHOLOGY, AND SPECIAL EDUCATION

- CEP 807 ~~Capstone in Educational Technology~~
Capstone Seminar
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to master's students in the Educational Technology Major or approval of department.
Culmination of the Master of Arts in Educational Technology degree experience.
Assessment and synthesis of educational technology knowledge and skill development.
~~Effective Summer 2013~~ Effective Summer 2022
- CEP 820 ~~Teaching Students Online~~
Teaching and Learning Online
Fall of every year. Spring of every year. Summer of every year. 3(3-0) ~~RB: CEP 810 and CEP 811 and CEP 812~~
Strategies for constructing and implementing online curricula aimed at students across the lifespan. Strategies, frameworks, models, and theories related to online teaching and learning applied to design and implementation of online learning experiences.
~~Effective Summer 2013~~ Effective Summer 2022

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

- ECE 871 Micro-electro-mechanical Systems Fabrication
Spring of every year. 3(3-0) P: ~~ECE 870 or ECE 477~~ RB: ECE 477
~~Development of a complete integrated microsystem from inception to final test. Design, fabrication and testing of integrated microsystems. Development of a complete multichip microsystem containing sensors, signal processing, and an output interface. Basic MOS device and circuit processes, wafer bonding and micromachining, low power portable devices and diamond MEMS chips. Design, simulation, fabrication and testing of integrated microsystems. Development of a complete microsystem containing sensors and actuators using Silicon On Glass (SOG) MEMS process. Basic E/D MOS circuits chips will designed and simulated but will not be fabricated. Fabricated MEMS chips will be tested.~~
Development of a complete integrated microsystem from inception to final test. Design, fabrication and testing of integrated microsystems. Development of a complete multichip microsystem containing sensors, signal processing, and an output interface. Basic MOS device and circuit processes, wafer bonding and micromachining, low power portable devices and diamond MEMS chips. Design, simulation, fabrication and testing of integrated microsystems. Development of a complete microsystem containing sensors and actuators using Silicon On Glass (SOG) MEMS process. Basic E/D MOS circuits chips will designed and simulated but will not be fabricated. Fabricated MEMS chips will be tested.
~~Effective Spring 2004~~ Effective Spring 2023

COLLEGE OF ENGINEERING

EGR 102 Introduction to Engineering Modeling
Fall of every year. Spring of every year. Summer of every year. 2(1-3) P: (MTH 132 or concurrently) or (MTH 152H or concurrently) or (LB 118 or concurrently) R: Open to students in the College of Engineering or in the Lyman Briggs College. ~~Not open to students with credit in CSE 131.~~
Application of systematic approaches to engineering problems. Problem decomposition and identification of a solution approach. Solution using tools such as advanced spreadsheet features and MATLAB. Data representation, curve fitting and analysis. Mathematical modeling of engineering systems. Application of principles through team-based engineering projects.
~~Effective Fall 2014~~ Effective Fall 2022

DEPARTMENT OF FINANCE

FI 321 Theory of Investments
Fall of every year. Spring of every year. 3(3-0) ~~P: FI 314 or FI 320~~ P: FI 311 or FI 311H or FI 320 ~~R: Open to juniors or seniors in the Actuarial Science Major or in the Actuarial Science Minor or in the Economics Major.~~ R: Open to juniors or seniors in the Financial Planning and Wealth Management Minor or in the Actuarial Science Major or in the Actuarial Science Minor or in the Economics Major and not open to students in the Accounting major or in the Management Major or in the Marketing Major or in the Supply Chain Management Major or in the Finance Major. Not open to students with credit in FI 312.
Theoretical analysis of common stocks, bonds, options and futures. Tradeoff between risk and return, market efficiency, efficient portfolios and CAPM. Cash flow evaluation and option evaluation.
~~Effective Spring 2021~~ Effective Fall 2022

FI 370 Introduction to Financial Planning and Wealth Management
Fall of every year. 3(3-0) ~~P: FI 314~~ P: FI 311 or FI 311H or FI 320 ~~R: Open to juniors or seniors in the Eli Broad College of Business and The Eli Broad Graduate School of Management.~~ R: Open to juniors or seniors in the Eli Broad College of Business and The Eli Broad Graduate School of Management and open to students in the Financial Planning and Wealth Management Minor.
Techniques used to develop and implement comprehensive plans to achieve a person's overall financial objectives. Budgeting, liability management, investing, tax planning, risk management, employee benefits, retirement planning, and estate planning.
~~Effective Fall 2020~~ Effective Fall 2022

FI 460 Estate and Income Tax Planning
Fall of every year. 3(3-0) P: FI 370 or concurrently R: ~~Open to juniors or seniors in the Eli Broad College of Business and The Eli Broad Graduate School of Management.~~ R: Open to juniors or seniors in the Eli Broad College of Business and The Eli Broad Graduate School of Management or in the Financial Planning and Wealth Management Minor. ~~C: FI 370 concurrently.~~
Estate planning and income tax planning issues for the financial planner and wealth management advisor.
~~Effective Spring 2021~~ Effective Fall 2022

FI 470 Advanced Financial Planning and Wealth Management
Spring of every year. 3(3-0) ~~P: FI 370~~ P: FI 370 and FI 380 and FI 460 ~~R: Open to juniors or seniors in the Eli Broad College of Business and The Eli Broad Graduate School of Management.~~ R: Open to juniors or seniors in the Eli Broad College of Business and The Eli Broad Graduate School of Management and open to students in the Financial Planning and Wealth Management Minor.
~~Advanced estate, tax and retirement planning. Client management, planning tools and software applications. Creation of a comprehensive financial plan. Capstone course focused on all aspects of financial planning. Client management, planning tools and software applications. Creation of a comprehensive financial plan.~~
~~Effective Fall 2020~~ Effective Fall 2022

- FI 480 Financial Risk Management
Spring of every year. 3(3-0) P: ~~(FI 311 or FI 320) and (STT 200 or STT 201 or STT 231 or STT 315 or STT 351 or STT 421 or STT 441) and FI 380~~ P: (FI 311 or FI 320) and (STT 200 or STT 201 or STT 231 or STT 315 or STT 351 or STT 421 or STT 441) RB: Knowledge of calculus is recommended but not required. ~~R: Open to students in the Insurance and Risk Management Minor or approval of department.~~ R: Open to students in the Finance Major and open to students in the Insurance and Risk Management Minor or approval of department.
Ways in which risks are quantified and managed by financial institutions. Nature of financial institutions and their regulation, the Basel Accords, coherent risk measures, value at risk, copulas, credit risk, operational risk, liquidity risk, and the financial crisis of 2007.
~~Effective Spring 2020~~ Effective Fall 2022
- FI 481 ~~Crises, Insurance, and Risk Management~~
Advanced Enterprise Risk Management and Industry Applications
~~Fall of every year. Spring of every year. 3(3-0) P: (FI 311 or FI 320) and (STT 200 or STT 201 or STT 231 or STT 315 or STT 351 or STT 421 or STT 441) P: (FI 311 or FI 320) and (STT 200 or STT 201 or STT 231 or STT 315 or STT 351 or STT 421 or STT 441) and FI 380~~ R: Open to students in the Insurance and Risk Management Minor or approval of department.
~~Various crises, including financial crises, and natural and man-made disasters. Reproduction of such crises on financial industry and insurance regulations on the structures of the financial and insurance industries and on the products offered and on the pricing of those products. Capstone course for the Insurance and Risk Management minor. Macro risk and crisis management topics. Management of system-wide real and financial crises.~~
~~Effective Fall 2018~~ Effective Fall 2022
- FI 830 Introduction to Financial Planning and Wealth Management
Fall of every year. Spring of every year. 3(3-0) P: FI 801 ~~R: Open to students.~~ R: Open to students in the Financial Planning and Wealth Management Major and open to students in the Financial Planning and Wealth Management Graduate Certificate. Not open to students with credit in FI 370.
Techniques used to develop and implement comprehensive plans to achieve a person's overall financial objectives. Budgeting, debt management, investing, tax planning, risk management, employee benefits, retirement planning, and estate planning.
~~Effective Spring 2021~~ Effective Fall 2022
- FI 832 Principles of Insurance and Risk Management
Fall of every year. Spring of every year. 3(3-0) P: FI 801 R: Open to students in the Financial Planning and Wealth Management Major and open to students in the Financial Planning and Wealth Management Graduate Certificate. Not open to students with credit in FI 380.
Techniques for measuring and managing risk. Pure risks related to mortality, health-related expenses, property damage, and product liability. Management techniques studied include risk assumption, prevention, diversification, and transfer via insurance and non-insurance market mechanisms.
~~Effective Spring 2021~~ Effective Fall 2022
- FI 836 Estate and Income Tax Planning
Fall of every year. Spring of every year. 3(3-0) P: FI 801 R: Open to students in the Financial Planning and Wealth Management Major and open to students in the Financial Planning and Wealth Management Graduate Certificate. Not open to students with credit in FI 480.
Issues in estate planning and income tax planning for the financial planner and wealth management advisor.
~~Effective Spring 2021~~ Effective Fall 2022
- FI 838 Advanced Financial Planning and Wealth Management
Fall of every year. Spring of every year. 3(3-0) P: FI 801 and FI 830 and FI 832 and FI 836 R: Open to students in the Financial Planning and Wealth Management Major and open to students in the Financial Planning and Wealth Management Graduate Certificate. Not open to students with credit in FI 470.
Advanced retirement planning, client management, planning tools and software applications. Case-based capstone course resulting in the creation of a comprehensive financial plan.
~~Effective Spring 2021~~ Effective Fall 2022

- FI 844 Corporate Financial Strategies
Fall of every year. 1 to 3 credits. ~~P: MBA 832 or approval of department~~ P: MBA 822 or approval of department RB: FI 851 or FI 845 R: Open to MBA students or approval of department.
Applying financial strategies to managerial decision making.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 845 Financial Modeling and Simulation I
Fall of every year. Spring of every year. 1 to 3 credits. ~~P: MBA 832 or approval of department~~ P: MBA 822 or approval of department RB: FI 851 R: Open to master's students in the Finance Major and open to MBA students or approval of department.
Applications of financial theory through computer modeling. Financial forecasting, cash flow modeling, and valuation.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 847 Corporate Strategies and Risk Management
Fall of every year. 1 to 3 credits. ~~P: FI 844~~ P: MBA 822 or approval of department RB: FI 845 and FI 851 R: Open to master's students in the Finance Major and open to MBA students or approval of department.
Identifying corporate strategies to help manage business, financing, and competitive risks. Case studies.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 850 Introduction to Investments I
Spring of every year. 1 to 3 credits. ~~P: MBA 832 or approval of department~~ P: MBA 822 or approval of department R: Open to master's students in the Finance Major and open to MBA students or approval of department.
Essential financial theories and quantitative tools related to the field of investments. Topics include behavior and distribution of stock returns, mean-variance optimization model of portfolio selection, basic asset pricing theories and market efficiency.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 853 Debt and Money Instruments and Markets
Fall of every year. 1 to 3 credits. ~~P: MBA 832 and FI 851 or approval of department~~ P: FI 851 or approval of department R: Open to master's students in the Finance Major and open to MBA students or approval of department.
Fixed-income security markets. Valuation of traded instruments.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 859 Mergers and Acquisitions
Fall of every year. 1 to 3 credits. ~~P: MBA 832 or FI 801~~ P: MBA 822 or approval of department R: Open to master's students in the Finance Major and open to MBA students or approval of department.
Provides a broad overview of corporate mergers and acquisitions from the finance perspective.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 860 Multinational Corporate Finance
Fall of every year. 1 to 3 credits. ~~P: MBA 832 or approval of department~~ P: MBA 822 or approval of department R: Open to master's students in the Finance Major and open to MBA students or approval of department.
Corporate financial management in a multinational setting.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 861 International Financial Markets and Risk Management
Fall of every year. 1 to 3 credits. ~~P: MBA 832 or approval of department~~ P: MBA 822 or approval of department R: Open to master's students in the Finance Major and open to MBA students.
Financial investments and risk management in a multinational setting.
~~Effective Fall 2013~~ Effective Fall 2022

- FI 862 Corporate Strategy Valuation
Spring of every year. 1 to 3 credits. ~~P: MBA 832 or approval of department~~ P: MBA 822 or approval of department R: Open to master's students in the Finance major and open to MBA students or approval of department.
Measuring and managing the valuation of corporate strategies.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 863 Corporate Restructuring and Governance
Fall of every year. 1 to 3 credits. ~~P: (MBA 832 or FI 801) and FI 859~~ P: (FI 859 or approval of department) and FI 859 R: Open to master's students in the Finance Major and open to MBA students.
Provides a broad overview of mergers, corporate restructuring, divestitures and bankruptcy from the finance perspective.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 865 Corporate Real Options Valuation
Spring of every year. 1 to 3 credits. ~~P: MBA 832 or approval of department~~ P: MBA 822 or approval of department R: Open to master's students in the Finance major and open to MBA students.
Application of the real options methodology to analyze practical problems in corporate finance.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 869 Entrepreneurial Finance and Venture Capital
Spring of every year. 1 to 3 credits. ~~P: MBA 832 or FI 801~~ P: MBA 822 R: Open to master's students in the Finance major and open to MBA students.
Introduction to the financing and valuation of entrepreneurial startups, venture capital and private equity. How to prepare a successful business plan to raise financing from venture capitalists. Structuring venture capital and private equity deals.
~~Effective Fall 2013~~ Effective Fall 2022
- FI 870 Venture Capital and Private Equity
Spring of every year. 1 to 3 credits. ~~P: (MBA 832 or FI 801) and FI 869~~ P: FI 859 or approval of department R: Open to master's students in the Finance major and open to MBA students or approval of department.
Advanced topics in the financing of entrepreneurial startups, venture capital and private equity. Valuation for entrepreneurial startups, venture capital and private equity, and institutions. Corporate venture capital. Venture capital investing and fundraising. Private equity investments. Sale of venture capital-backed entrepreneurial firms, and initial public equity offerings.
~~Effective Fall 2013~~ Effective Fall 2022

DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION

- FSC 421 Food Laws and Regulations
Spring of odd years. Summer of even years. 3(3-0) ~~P: HNF 150 or FSC 211 or ABM 100~~ P: HNF 150 or FSC 211 or AFRE 100
Adoption, interpretation, and enforcement of laws and regulations governing food processing and foodservice systems. Impact of regulation on food production, availability, marketing, and safety.
~~Effective Fall 2013~~ Effective Summer 2022
- FSC 423 Functional Foods and Human Health
Spring of even years. 3(3-0) ~~P: (HNF 150 or (HNF 311 or concurrently)) and (MMG 205 or MMG 301 or FSC 342) and ((BMB 200 or concurrently) or (BMB 401 or concurrently))~~ P: ((FSC 211) or HNF 150) and (MMG 201 or MMG 301 or FSC 342) and ((BMB 200 or concurrently) or (BMB 401 or concurrently))
Concept, nature and classification of functional foods. Spectrum of biological activity. Positive and negative impacts on health, and regulatory aspects.
~~Effective Fall 2021~~ Effective Summer 2022

DEPARTMENT OF HORTICULTURE

- HRT 102 Plants for Food, Fun, and Profit
Fall of every year. Spring of every year. Summer of every year. 2(2-0)
~~Introduction to the science and art of horticulture including plant breeding, ornamental plant and food production (organic and traditional), postharvest handling, horticultural industries and landscaping. Educate consumers about horticultural plants, products, and their relationship to environment.~~ Introduction to the science and art of horticulture including home and commercial horticulture, and sustainable production practices. Educate consumers about horticultural plants, products, and their relationship to the environment.
~~Effective Summer 2016~~ Effective Fall 2022
- HRT 362 Applied Crop Improvement
~~Spring of every year.~~ Spring of odd years. 1(3-0) P: HRT 203 and PLB 105
~~History of plant improvement. Basic genetic principles of crop breeding and biotechnology. Class meets weeks 6 to 10 of the semester.~~ History of plant improvement. Basic genetic principles of crop breeding and biotechnology.
~~Effective Fall 2014~~ Effective Fall 2022
- HRT 403 Handling and Storage of Horticultural Crops
Fall of every year. ~~3(2-3)~~ 3(3-0) P: BS 161 or PLB 105 R: Not open to freshmen or sophomores.
~~Biological principles involved in quality maintenance of horticultural products. Control of deterioration during harvesting, handling, transport, and storage.~~ Biological principles involved in quality maintenance of horticultural products. Control of deterioration during harvesting, handling, transport, and storage. Food security.
SA: HRT 482
~~Effective Fall 2014~~ Effective Fall 2022
- HRT 405 Sustainable Practices for Horticultural Food Crop Production
Spring of every year. 1(1-0) P: HRT 203
Effects of horticultural practices on ecosystem services, integrated efficiency across perennial and annual food crop production systems. Impact of crops on the land and biodiversity. Management decision-making. Global forces impacting sustainability.
DELETE COURSE
Effective Fall 2022
- HRT 460 Green Roofs and Walls
~~Fall of every year.~~ Spring of every year. 2(2-0) Interdepartmental with Fisheries and Wildlife and Geography and Planning, Design and Construction. P: HRT 203 or FW 101 or GEO 206 or PDC 120 or EGR 100 R: Open to juniors or seniors or graduate students.
Green roof and wall design and installation practices including plant species and substrates. Environmental impact, ecosystem services, integration with other environmental practices. Influence of economics, public policy, and industry organizations on the implementation of green roofs on a wide scale. Multidisciplinary nature of planning and implementation of successful green roof and wall projects.
~~Effective Fall 2016~~ Effective Fall 2022

DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY STUDIES

- HDFS 448 Child and Family Policy
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to juniors or seniors or graduate students.
Issues faced by American families and children. Relationships among social science research, theory, and public policy.
SA: FCE 448
~~Effective Summer 2014~~ Effective Fall 2022

COLLEGE OF HUMAN MEDICINE

- HM 591 Special Problems in Human Medicine
Fall of every year. Spring of every year. Summer of every year. 1 to 34 credits. ~~A student may earn a maximum of 36 credits in all enrollments for this course. A student may earn a maximum of 54 credits in all enrollments for this course.~~ R: Open only to graduate professional students in the College of Human Medicine. ~~R: Open to graduate-professional students in the College of Human Medicine.~~
Work under the direction of a faculty member on an experimental, theoretical, or applied problem that requires a broad, interdisciplinary approach.
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 6 semesters after the end of the semester of enrollment.~~ The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
~~Effective Fall 1992~~ Effective Summer 2022

DEPARTMENT OF LINGUISTICS, LANGUAGES AND CULTURES

- FLT 885 Experiential Module in Foreign Language Teaching
Fall of every year. Spring of every year. Summer of every year. ~~2 to 5 credits.~~ 1 to 5 credits. A student may earn a maximum of 5 credits in all enrollments for this course. R: Open to graduate students in the Foreign Language Teaching Major or approval of department. Not open to students with credit in LLT 890.
Experience in foreign language teaching and learning. Action research, community outreach, immersion, program administration, professional seminar, teaching practicum, technology enhancement, or service learning.
~~Effective Fall 2024~~ Effective Fall 2022
- LIN 838 Semantics and Pragmatics II
Fall of every year. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: LIN 837 or approval of department
Empirical phenomena in semantics and pragmatics. Advanced systems of semantic interpretation.
~~Effective Fall 2024~~ Effective Fall 2022

DEPARTMENT OF MARKETING

- MKT 327 Introduction to Marketing
Fall of every year. Spring of every year. Summer of every year. 3(3-0) ~~R: Open to juniors or seniors and not open to students in the Accounting major or in the Business-Admitted major or in the Business-Preference major or in the Finance Major or in the Human Resource Management Major or in the Management Major or in the Supply Chain Management Major or in the Marketing Major.~~ R: Open to juniors or seniors or sophomores and not open to students in the Accounting major or in the Business - Admitted major or in the Business-Preference major or in the Finance Major or in the Human Resource Management Major or in the Management Major or in the Supply Chain Management Major or in the Marketing Major. ~~Not open to students with credit in MKT 300 or HB 375.~~ Not open to students with credit in HB 375 or MKT 300.
Buyer behavior, segmentation, positioning, demand analysis, information, pricing, promotion, channels, product policies, and ethics in consumer, reseller, industrial, and service markets.
SA: MSC 327
~~Effective Fall 2020~~ Effective Fall 2022

COLLEGE OF NATURAL SCIENCE

~~NSC 495~~
HBIO 495

Capstone in Human Biology (W)
Fall of every year. Spring of every year. 3(3-0) P: Completion of Tier I writing requirement. R: Open to seniors in the Human Biology Major.
Integration of human biology disciplines with a focus on health and disease.
SA: NSC 495
~~Effective Fall 2019~~ Effective Fall 2022

~~NSC 496~~
HBIO 496

Directed Study in Human Biology
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of Tier I writing requirement.
Directed studies in human biology.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
SA: NSC 496
~~Effective Fall 2014~~ Effective Fall 2022

~~NSC 497~~
HBIO 497

Internship in Human Biology
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of Tier I writing requirement.
Not open to students with credit in NSC 493.
Practical experience applying human biology training outside the classroom setting.
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: NSC 497
~~Effective Fall 2014~~ Effective Fall 2022

~~NSC 498~~
HBIO 498

Research in Human Biology
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of Tier I writing requirement.
Research in faculty laboratories
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: NSC 498
~~Effective Fall 2014~~ Effective Fall 2022

SCHOOL OF PLANNING, DESIGN AND CONSTRUCTION

IDES 142

Design Theory Studio
~~Fall of every year. Spring of every year. Summer of every year.~~ 3(0-6) ~~P: IDES 140 or concurrently~~
P: IDES 150 R: Open to students in the Interior Design Major.
Design elements and principles in creative problem solving.
SA: HED 142
~~Effective Summer 2013~~ Effective Fall 2022

IDES 150

Interior Design Drafting
~~Fall of every year. Spring of every year. Summer of every year.~~ 3(1-4) R: Open to students in the Interior Design Major.
Drafting and two-dimensional drawing for interior design.
SA: HED 150
~~Effective Summer 2013~~ Effective Fall 2022

- IDES 250 3D Modeling and Visualization
Spring of every year. 3(3-0) ~~P: IDES 240~~ P: IDES 340 and IDES 343 R: Open to students in the Interior Design Major.
Applications in 3D modeling, digital visualization, and structural principles in generating design solutions.
SA: HED 250
~~Effective Summer 2019~~ Effective Fall 2022
- IDES 252 Interior Design Synthesis I
Spring of every year. 4(1-6) ~~P: IDES 140 and IDES 142 and IDES 150 and IDES 152~~ P: IDES 340 and IDES 343 R: ~~Open to sophomores or juniors or seniors in the Interior Design Major.~~ R: Open to students in the Interior Design Major.
Design process with emphasis on problem resolution for residential and commercial interiors.
SA: HED 252
~~Effective Summer 2013~~ Effective Fall 2022
- IDES 340 Interior Design Specifications and Workroom Practices
Fall of every year. 3(3-0) ~~P: (IDES 252) and completion of Tier I writing requirement~~ P: IDES 142 and IDES 240 R: Approval of department.
Specifications and workroom practices used for fabrication and installation of design solutions for interior spaces.
SA: HED 340
~~Effective Spring 2020~~ Effective Fall 2022
- IDES 342 Interior Design: Human Dimensions
Fall of every year. 3(2-2) ~~P: IDES 252~~ P: IDES 252 and IDES 250 R: ~~Approval of department.~~ R: Open to students in the Interior Design Major.
Human dimensions as determining factors in designing human environments. Standards and concepts of universal fit.
SA: HED 342
~~Effective Summer 2013~~ Effective Fall 2022
- IDES 343 Interior Design Presentation and Media
Fall of every year. 3(0-6) ~~P: IDES 252~~ P: IDES 142 and IDES 240 R: ~~Open to juniors and open to seniors in the Interior Design Major. Approval of department.~~ R: Approval of department.
Design communication through two- and three-dimensional drawings in media.
Presentation procedures and techniques.
SA: HED 242, HED 343
~~Effective Summer 2013~~ Effective Fall 2022
- IDES 344 History of Interior Design: Ancient Through Rococo
Fall of every year. 3(3-0) ~~R: Not open to freshmen.~~ R: Open to students in the Department of Art, Art History, and Design or in the School of Planning, Design and Construction or in the Cities: Environment, Design and Society Minor or approval of department.
Historical development of furniture, textiles, and other decorative arts in interior design and architecture.
SA: HED 344
~~Effective Summer 2013~~ Effective Fall 2022
- IDES 350 Interior Design Lighting and Environmental Systems
~~Fall of every year.~~ Spring of every year. 3(2-2) ~~P: IDES 340 and IDES 342 and IDES 343~~ P: IDES 250 and IDES 252 R: ~~Approval of department.~~ R: Open to students in the Interior Design Major.
Lighting and environmental systems including lighting, ventilation, acoustics, heating and cooling. Integration of lighting and environmental systems with interior space.
SA: HED 350
~~Effective Summer 2013~~ Effective Fall 2022

- IDES 352 Interior Design Synthesis II
Spring of every year. 4(1-6) ~~P: IDES 340 and IDES 342 and IDES 343~~ P: IDES 342 and IDES 350
~~R: Approval of department.~~ R: Open to students in the Interior Design Major.
Concept development and problem solving in design of interior spaces to meet human and environmental needs. Cultural diversity and client interaction.
SA: HED 352
~~Effective Summer 2013~~ Effective Fall 2022
- IDES 354 History of Interior Design: Neo-Classical Through Modern
Spring of every year. 3(3-0) P: IDES 344 ~~R: Not open to freshmen.~~ R: Open to students in the Department of Art, Art History, and Design or in the School of Planning, Design and Construction or in the Cities: Environment, Design and Society Minor or approval of department.
Historical development of furniture, textiles and the other decorative arts from the neoclassical through the modern period. Major social, cultural, and psychological influences.
SA: HED 354
~~Effective Summer 2013~~ Effective Fall 2022
- IDES 393 Introduction to Professional Practice
Spring of every year. 1(1-0) P: IDES 340 and IDES 343 R: Open to students in the Interior Design Major.
Introduction to the design profession and its opportunities, focusing on career planning and preparation.
Request the use of the Pass-No Grade (P-N) system.
SA: HED 393
~~Effective Spring 2020~~ Effective Fall 2022
- IDES 440 Contemporary Design Issues
Spring of every year. 2(2-0) ~~P: (IDES 442) and completion of Tier I writing requirement~~ R: Open to students in the Department of Art, Art History, and Design or in the School of Planning, Design and Construction or in the Cities: Environment, Design and Society Minor or approval of department.
Issues related to design professionals and their clients.
SA: HED 440
~~Effective Summer 2013~~ Effective Fall 2022
- IDES 441 Interior Design Open Office Systems
Fall of every year. ~~1(2-0)~~ 1(1-0) P: ~~IDES 350 and IDES 352~~ P: IDES 352 and IDES 440 and IDES 451 R: Open to students in the Interior Design Major. ~~C: IDES 442 concurrently.~~
Planning and design of open office systems including panel and electrical plans, power plan development, furniture and lighting layouts, specifications, and presentation.
Offered first half of semester.
~~Effective Summer 2013~~ Effective Fall 2022
- IDES 442 ~~Interior Design Programming~~
Interior Design Programming (W)
Fall of every year. 3(1-4) P: ~~(IDES 350 and IDES 352) and completion of Tier I writing requirement~~ P: (IDES 352 and IDES 440 and IDES 451) and completion of Tier I writing requirement R: Open to students in the Interior Design Major. ~~C: IDES 441 concurrently.~~
Identifying, programming, and preparing schematics of the senior interior design project. Studio sketch portfolio guidelines. Site visits required.
~~Effective Summer 2013~~ Effective Fall 2022
- IDES 451 Interior Design Professional Practice
Spring of every year. 2(2-0) P: ~~(IDES 442) and completion of Tier I writing requirement~~ P: IDES 342 and IDES 350 and IDES 393 R: Open to seniors in the Interior Design Major. R: Open to students in the Interior Design Major. ~~C: IDES 452 concurrently.~~
Professional practice standards, ethics, and client interaction in interior design. Field trip required.
~~Effective Summer 2013~~ Effective Fall 2022

IDES 452 Interior Design Synthesis III
Spring of every year. 4(1-6) ~~P: (IDES 442) and completion of Tier I writing requirement~~ P: IDES 441 and IDES 442 ~~R: Open to seniors in the Interior Design Major.~~ R: Open to students in the Interior Design Major. ~~C: IDES 451 concurrently.~~
Advanced studio processes for solving complex interior design problems. Studio application of professional practice standards to specific capstone projects. Field trip required.
~~Effective Summer 2013~~ Effective Fall 2022

IDES 456 Historic Preservation and Sustainability
Fall of every year. ~~Summer of every year.~~ 3(3-0) ~~RB: IDES 140 or IDES 142 or IDES 150 or IDES 452~~ RB: Basic understanding of the built environment ~~R: Open to students in the Interior Design Major.~~ R: Open to students in the School of Planning, Design and Construction or approval of department.
The interior design component of the preservation movement. Historic restoration and adaptive reuse.
SA: HED 456
~~Effective Spring 2020~~ Effective Fall 2022

DEPARTMENT OF PLANT, SOIL AND MICROBIAL SCIENCES

CSS 105 Agricultural Industries Seminar
Fall of every year. 1(2-0) R: Open to agricultural technology students in the Agricultural Industries Major.
Preparation for academic and professional success. Introduction to opportunities in the agriculture industry.
SA: AEE 105
DELETE COURSE
Effective Spring 2022

CSS 143 Introduction to Soil Science
Fall of every year. Spring of every year. 2(2-0) R: Open to agricultural technology students in the Institute of Agricultural Technology. Not open to students with credit in CSS 210.
Soil and its impact on plant growth, plant and water relations, drainage, nutrients, soil as a resource, and erosion control techniques.
DELETE COURSE
Effective Spring 2022

CSS 201 Forage Crops
Fall of every year. 3(2-2) R: Open to undergraduate students or agricultural technology students.
~~Forage crop production, management, and utilization; crop identification; soil fertilization; planting and harvesting of grasses and legumes. Identification, production, management, and use of grass and legume forage crops as hay, silage, and pasture.~~
Effective Spring 2014 Effective Spring 2022

PLP 105 Fundamentals of Applied Plant Pathology
Spring of every year. ~~2(2-2)~~ 1(1-0) R: Open to students in the Institute of Agricultural Technology. ~~Not open to students with credit in PLP 405.~~ C: PLP 105L concurrently.
Diseases of major agronomic and horticultural plants. Disease management. Offered first ten weeks of the semester.
~~Effective Spring 2014~~ Effective Spring 2023

DEPARTMENT OF POLITICAL SCIENCE

- PLS 481 ~~Undergraduate Research Seminar~~
Undergraduate Research Seminar (W)
Fall of every year. Spring of every year. ~~4 to 6 credits. 4(4-0) A student may earn a maximum of 6 credits in all enrollments for this course.~~ A student may earn a maximum of 8 credits in all enrollments for this course. ~~P: PLS 200 or concurrently P: (PLS 201 or concurrently) and completion of Tier I writing requirement RB: PLS 204 or concurrently RB: Political Science major or student with background in political science or international studies. R: Approval of department.~~
Advanced research seminar for students in the political science program.
~~SA: PLS 481H~~
~~Effective Fall 2024~~ Effective Fall 2022

DEPARTMENT OF RELIGIOUS STUDIES

- REL 150 ~~Introduction to Biblical Literature~~
Exploring Biblical Literature
Fall of every year. 3(3-0) R: Not open to seniors.
A critical survey of biblical texts, including the Hebrew Bible, the New Testament, and writings found in the Apocrypha/Deuterocanon, that combines historical and literary analysis with attention to the ancient religious context of this literature.
~~Effective Spring 2015~~ Effective Summer 2022
- REL 420 Birth of Christianity (W0/)
Spring of every year. 3(3-0) P: Completion of Tier I Writing Requirement R: Not open to freshmen or sophomores.
~~The historical setting and types and meaning of the text of the New Testament explored through various techniques of historical, literary, and textual analysis. The settings of the New Testament and other early Christian literature explored through various techniques of historical and literary analysis.~~
~~Effective Spring 2015~~ Effective Fall 2022

DEPARTMENT OF ROMANCE AND CLASSICAL STUDIES

- ROM 805 Topics in Critical Theory
Fall of every year. ~~Spring of every year. 4(4-0)~~ 3(3-0) ~~A student may earn a maximum of 3 credits in all enrollments for this course.~~ R: Approval of department.
Introduction to post-structuralist critical theory.
~~Effective Fall 2012~~ Effective Fall 2022

COLLEGE OF SOCIAL SCIENCE

- SSC 442 Social Science Data Analytics Applications
Fall of every year. Spring of every year. 3(3-0) ~~Interdepartmental with Geography and Political Science.~~ Interdepartmental with Geography P: PLS 202
Application of computational tools for data collection and visualization to various topics in social science research.
~~Effective Fall 2019~~ Effective Fall 2022

SCHOOL OF SOCIAL WORK

- SW 810 Theories of Groups, Organizations, and Communities in Social Work
Fall of every year. 3(3-0) R: Open to graduate students in the School of Social Work. ~~Not open to students with credit in SW 812B.~~
Ecological and social systems perspectives. Theories of groups, formal organizations, and communities in a systems framework. Ethical and historical foundations of social work. Knowledge of the social, structural, and contextual factors that impact human functioning in a multi-system context.
~~Effective Summer 2018~~ Effective Summer 2022

- SW 812B Integration of Theory, Policy, and Evaluation in Social Work
Summer of every year. 2(2-0) R: Open only to graduate students in School of Social Work. Not open to students with credit in SW 810 or SW 811.
Ecological concepts of communities, groups, families, and individuals. Policy development and evaluation of social work practice.
DELETE COURSE
Effective Summer 2022
- SW 842B Advanced Generalist Social Work Practice Methods
Summer of every year. 2(2-0) R: Open to master's students in the School of Social Work or approval of school. Not open to students with credit in SW 840 or SW 841.
Selection, implementation, and evaluation of models of social work intervention.
DELETE COURSE
Effective Summer 2022
- SW 844 Essential Theories in Organizations and Communities Social Work Practice
Fall of every year. 2(2-0) ~~P: SW 810 or SW 842B~~ P: SW 810 R: Open to graduate students in the School of Social Work or approval of school.
~~Theoretical frameworks associated with the study of leadership, organizations and communities in social work practice. Apply selected macro theoretical frameworks associated with the study of leadership, organizations and communities to social work practice.~~
Effective Fall 2017 Effective Summer 2022
- SW 893B Social Work Field Education: Graduate Advanced Generalist Practice
Summer of every year. 2(1-8) P: SW 842B or concurrently R: Open to master's students in the School of Social Work or approval of school. Not open to students with credit in SW 894B.
Professionally supervised foundations of social work practice in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
DELETE COURSE
Effective Summer 2022
- SW 894A Social Work Field Education: Graduate Generalist Practice I
Fall of every year. Spring of every year. Summer of every year. 4(1-16) P: SW 840 or concurrently R: Open to master's students in the School of Social Work or approval of school. ~~Not open to students with credit in SW 893B.~~
Professionally supervised foundations of social work practice in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Summer 2020~~ Effective Summer 2022
- SW 894B Social Work Field Education: Graduate Generalist Practice II
Fall of every year. Spring of every year. Summer of every year. 4(1-16) P: SW 894A and (SW 841 or concurrently) R: Open to master's students in the School of Social Work or approval of school. ~~Not open to students with credit in SW 893B.~~
Continuation of professionally supervised foundations of social work practice in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Spring 2020~~ Effective Summer 2022
- SW 894D Social Work Field Education: Clinical Practice I
Fall of every year. Spring of every year. Summer of every year. 4(1-16) ~~P: (SW 893B or SW 894B) and (SW 850 or concurrently)~~ P: SW 894B or (SW 850 or concurrently) R: Open to master's students in the School of Social Work or approval of school.
Professionally supervised clinical social work practice with individuals, dyads, families, and small groups in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Summer 2020~~ Effective Summer 2022

- SW 894E Social Work Field Education: Clinical Practice II
~~Fall of every year.~~ Spring of every year. Summer of every year. 4(1-16) P: SW 894D and (SW 851 or concurrently) R: Open to master's students in the School of Social Work or approval of school.
Continuation of professionally supervised clinical social work practice with individuals, dyads, families and small groups in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Summer 2020~~ Effective Summer 2022
- SW 894G Social Work Field Education: Macro Practice I
~~Fall of every year.~~ Spring of every year. Summer of every year. 4(1-16) ~~P: (SW 803B or SW 804B) and (SW 865 or concurrently) P: (SW 865 or concurrently) or SW 894B~~ R: Open to master's students in the School of Social Work or approval of school.
Professionally supervised organization and community social work practice in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Summer 2020~~ Effective Summer 2022
- SW 894I Social Work Field Education: Macro Practice II
~~Fall of every year.~~ Spring of every year. Summer of every year. 4(1-16) P: SW 894G and (SW 866 or concurrently) R: Open to master's students in the School of Social Work or approval of school.
Continuation of professionally supervised organization and community social work practice in approved community agencies. Integration and application of concepts in social work practice.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Fall 2020~~ Effective Summer 2022

DEPARTMENT OF STATISTICS AND PROBABILITY

- STT 421 Statistics I
~~Fall of every year.~~ Spring of every year. Summer of every year. 3(3-0) ~~P: MTH 103 or MTH 110 or MTH 116 P: MTH 103 or MTH 116 or MTH 103B or MTH 124 or (MTH 132 or concurrently) or (MTH 133 or concurrently) or (MTH 234 or concurrently) or (MTH 299 or concurrently)~~ Not open to students with credit in STT 200 or STT 201.
Basic probability, random variables, and common distributions. Estimation and tests for one-, two-, and paired sample problems. Introduction to simple linear regression and correlation, one-way ANOVA.
~~Effective Fall 2014~~ Effective Summer 2022
- STT 422 Statistics II
~~Fall of every year.~~ Spring of every year. ~~Summer of every year.~~ 3(3-0) ~~P: STT 421 or STT 441 P: STT 421 or STT 442~~ Not open to students with credit in STT 464.
Goodness of fit and other non-parametric methods. Linear models including multiple regression and ANOVA for simple experimental designs.
~~Effective Fall 2017~~ Effective Summer 2022
- STT 461 Computations in Probability and Statistics
Spring of every year. 3(3-0) ~~P: (STT 441 and CSE 231) and (MTH 309 or MTH 314 or MTH 317H or MTH 415) P: (CMSE 201 or CSE 231) and (MTH 309 or MTH 314 or MTH 317H or MTH 415) and STT 441~~
Computer algorithms for evaluation, simulation and visualization. Sampling and prescribed distributions. Robustness and error analysis of procedures used by statistical packages. Graphics for data display, computation of probabilities and percentiles.
~~Effective Fall 2014~~ Effective Spring 2022

DEPARTMENT OF THEATRE

- DAN 352 Dance Technique II
Spring of every year. ~~2(0-6)~~ 3(0-6) A student may earn a maximum of 6 credits in all enrollments for this course. ~~P: DAN 351~~ R: Open to students in the Dance Minor and open to students in the Musical Theatre minor. Approval of department.
Dance technique for the intermediate dancer. Continued emphasis in development of the dancer with focus on efficiency and articulation of movement.
SA: THR 352
~~Effective Summer 2008~~ Effective Fall 2022
- DAN 451 Dance Technique III
Fall of every year. ~~2(0-6)~~ 3(0-6) A student may earn a maximum of 6 credits in all enrollments for this course. ~~P: DAN 352 or approval of department~~ R: Open to students in the Dance Minor and open to students in the Musical Theatre minor. Approval of department.
Dance technique for high intermediate to advanced dancer. Intensive practicum in selected dance genres that enhance the development of the dancer as a performing artist.
SA: THR 451
~~Effective Summer 2008~~ Effective Fall 2022
- DAN 452 Dance Technique IV
Spring of every year. ~~2(0-6)~~ 3(0-6) A student may earn a maximum of 6 credits in all enrollments for this course. ~~P: DAN 451 or approval of department~~ R: Open to students in the Dance Minor and open to students in the Musical Theatre minor. Approval of department.
Dance technique for the high intermediate to advanced dancer. Intensive practicum that continues to further enhance the development of the dancer artist.
SA: THR 452
~~Effective Summer 2008~~ Effective Fall 2022