

**MICHIGAN STATE UNIVERSITY**

**Report of  
THE UNIVERSITY COMMITTEE ON CURRICULUM  
to the Faculty Senate  
Actions by UCC  
March 18, 2025**

*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

March 18, 2025

TO: Faculty Senate

This report is prepared and distributed for the following purposes:

1. To report new academic programs, changes in academic programs, discontinuations of academic programs, new courses, permanent changes in courses, and deletions of courses.
2. To notify the initiating colleges, schools, and departments of approval by the University Committee on Curriculum of their requests for new academic programs, changes in academic programs, discontinuations of academic programs, new courses, permanent changes in courses, and deletions of courses.
3. To provide information to members of the faculty in each department about academic programs and courses in all colleges, departments, and schools of the University.

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

PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES:

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

PART II - NEW COURSES:<sup>1</sup>

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:<sup>1</sup>

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.

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

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

MICHIGAN STATE UNIVERSITY

March 18, 2025

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. Delete the curriculum and degree requirements for the **Master of Science** degree in **Sustainable Tourism and Protected Area Management** in the Department of Community Sustainability. 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 2025. No students are to be readmitted to the program effective Spring 2025. Effective Summer 2025, coding for the program will be discontinued and the program will no longer be available in the Department of Community Sustainability. Students who have not met the requirements for the Master of Science Degree in Sustainable Tourism and Protected Area Management through the Department of Community Sustainability prior to Summer 2025 will have to change their major.

Note: This program has been in moratorium since Spring 2025.

2. Delete the curriculum and degree requirements for the **Doctor of Philosophy** degree in **Sustainable Tourism and Protected Area Management** in the Department of Community Sustainability. 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 2025. No students are to be readmitted to the program effective Spring 2025. Effective Summer 2025, coding for the program will be discontinued and the program will no longer be available in the Department of Community Sustainability. Students who have not met the requirements for the Doctor of Philosophy Degree in Sustainable Tourism and Protected Area Management through the Department of Community Sustainability prior to Summer 2025 will have to change their major.

Note: This program has been in moratorium since Spring 2025.

3. Establish a **Agricultural Technology Certificate** in **Food Technology and Safety** in the Institute of Agricultural Technology. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its January 9, 2025 meeting.

a. **Background Information:**

Certificate programs and workshops in production agriculture and horticulture were developed and launched in 1894 as campus-based programs. In 1994, the Institute of Agricultural Technology started offering programs in collaboration with community colleges. The Food Technology and Safety (FTS) program is a standalone certificate similar to the IAT Food Processing, Technology, and Safety (FPTS) program, which partners with community colleges.

The development of these programs originated from an initiative led by the industry stakeholders and the Michigan Department of Agriculture and Rural Development (MDARD), aimed at addressing the workforce needs of food processors across the state. Industry stakeholders expressed concerns about finding and attracting a qualified and highly trained workforce.

The certificate has no accrediting body, but it is modeled after the Food Science program, which is accredited by the Institute of Food Technologists (IFT). Industry representatives, educators, and community partners served as advisory committee members to develop this program.

Food processing companies have indicated they experience challenges finding an available workforce with the necessary skill set when hiring new staff. MSU subsequently has the trained faculty and staff to provide technical training for students in this area. Many food technology industries currently employ professionals with no formal academic training in their respective industries. In addition, the industry is seeing growth and needs trained and skilled workers. Many industry professionals and those seeking a job would like an opportunity to further their education. A certificate from MSU will provide an opportunity for individuals to secure additional credibility in their respective industries.

The FTS program at MSU will provide more opportunities for students who wish to pursue an associate's degree (AAS) with Lansing Community College (LCC). Once approved, we will draft an articulation agreement with LCC so that students can apply the MSU credits they earn in FTS toward their AAS degree. This will be a cost and time to degree savings for the students.

b. **Academic Programs Catalog Text:**

The Food Technology and Safety program provides students with hands-on education in the processes and technologies used to convert commodities into consumable food products. Students can personalize their curriculum in various areas of study, from food processing and technology to facilities management to chemistry. The program incorporates applied learning experiences, like a mobile food processing lab, industry clerkships, and internships.

**Requirements for Food Technology and Safety**

**CREDITS**

Students must complete 48 credits from the following:

1. All of the following courses (41 credits):
 

	AE	153	Engine and Equipment Technology	2
	AFRE	100	Decision-making in the Agri-Food System	3
	AT	45	Agricultural Communications	2
	AT	71	Technical Mathematics	2
	AT	195	Research and Practice in Agricultural Technology	3
	AT	293	Professional Internship in Agricultural Technology	3
	FSC	113	Basic Commodity Overview Food Processing and Technology	3
	FSC	114	Food Processing and Technology Facilities Management	3
	FSC	125	Food Processing and Technology Unit Operations	2
	FSC	211	Principles of Food Science	3
	FSC	222	Professional Development and Career Planning in Food Science	1
	FSC	230	Fruit and Vegetable Processing	2
	FSC	231	Cereals Processing	2
	FSC	240	Applied Microbiology in Food Processing	2
	FSC	242	Applied Chemistry in Food Processing and Technology	2
	KIN	125	First Aid and Personal Safety	3
	PKG	101	Principles of Packaging	3
2. Complete a minimum of 7 elective credits from the list below or as approved by the program coordinator in the Institute of Agricultural Technology:
 

	AE	151	Fabrication Technology	2
	AFRE	232	Commodity Marketing I	3
	AFRE	240	Food Product Marketing	3
	AT	55	Agricultural Finance	3
	AT	101	Spanish for the Agricultural Industry	2
	AT	202	Agricultural Regulation Compliance and Safety	3
	CSS	120	Issues in Food and Agriculture	3
	HNF	150	Introduction to Human Nutrition	3

TSM	130	Energy Efficiency and Conservation in Agricultural Systems	3
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Effective Fall 2025.

4. Change the requirements for the **Bachelor of Science** degree in **Animal Science** in the Department of Animal Science.

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

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

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

The University's Tier II writing requirement for the Animal Science major is met by completing one of the following courses: Animal Science 301, 313, 314, 411, 427 or 435. Those courses are referenced in item 3. below.

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

ANS	300B	Advanced Meat Judging	2
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- (3) In item 3. h. make the following changes:

- (a) In the **Animal Industry** concentration under 5., add the following courses:

ANS	410	Stem Cells in Reproduction and Development	3
ANS	411	Neuroendocrine Control of Stress and Physiology (W)	3
ANS	416	Animal Growth and Development	3

Delete the following course:

ANS	409	Problems, Controversies and Advancements in Reproduction (W)	4
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- (b) In the **Animal Biology and Preveterinary** concentration under 3., add the following courses:

ANS	410	Stem Cells in Reproduction and Development	3
ANS	411	Neuroendocrine Control of Stress and Physiology (W)	3
ANS	416	Animal Growth and Development	3

Delete the following course:

ANS	409	Problems, Controversies and Advancements in Reproduction (W)	4
-----	-----	---	---

- (c) In the **Animal Biology and Preveterinary** concentration under 4., add the following courses:

PHY	221	Studio Physics for Life Scientists I	4
PHY	222	Studio Physics for Life Scientists II	4

- (d) In the **Animal Biology and Preveterinary** concentration under 4., change "MMG" courses to "MGI".

- (e) Change the name of the **Companion and Exotic Animal Biology** concentration to **Companion and Exotic Animal Industry**.

- (f) In the **Companion and Exotic Animal Industry** concentration change the total credits from '30 to 33' to '27 to 30'.
- (g) In the **Companion and Exotic Animal Industry** concentration, in item 1., delete the following courses:
- |     |     |                              |   |
|-----|-----|------------------------------|---|
| CEM | 252 | Organic Chemistry II         | 3 |
| CEM | 255 | Organic Chemistry Laboratory | 2 |
- (h) In the **Companion and Exotic Animal Industry** concentration, replace item 2. with the following:
- Two of the following courses (6 credits):
- |      |     |  |   |
|------|-----|--|---|
| CSUS | 473 | Social Entrepreneurship and Community Sustainability | 3 |
| ESHP | 170 | Business Model Design and Prototyping                | 3 |
| ESHP | 190 | Introduction to Entrepreneurship                     | 3 |
| REL  | 185 | Introduction to Religion and Nonprofits              | 3 |
| REL  | 285 | Introduction to Social Entrepreneurship and Religion | 3 |
- (i) In the **Companion and Exotic Animal Industry** concentration, in item 1., add the following courses:
- |     |     |   |   |
|-----|-----|---|---|
| ANS | 410 | Stem Cells in Reproduction and Development          | 3 |
| ANS | 411 | Neuroendocrine Control of Stress and Physiology (W) | 3 |
| ANS | 416 | Animal Growth and Development                       | 3 |
- Delete the following course:
- |     |     |  |   |
|-----|-----|--|---|
| ANS | 409 | Problems, Controversies and Advancements in Reproduction (W) | 4 |
|-----|-----|--|---|
- (j) In the **Dairy Industry** concentration, change the total credits from '38 to 40' to '37 to 40'.
- (k) In the **Dairy Industry** concentration, in item 1., add the following courses:
- |      |     |                               |   |
|------|-----|-------------------------------|---|
| ANS  | 132 | Dairy Farm Management Seminar | 2 |
| AFRE | 330 | Farm Management II            | 3 |
- Delete the following courses:
- |      |     |                               |   |
|------|-----|-------------------------------|---|
| ACC  | 230 | Survey of Accounting Concepts | 3 |
| AFRE | 430 | Farm Management II            | 3 |
- (l) In the **Dairy Industry** concentration, in item 3., add the following course:
- |    |     |                                       |   |
|----|-----|---------------------------------------|---|
| AT | 101 | Spanish for the Agricultural Industry | 2 |
|----|-----|---------------------------------------|---|
- Delete the following course:
- |     |     |  |   |
|-----|-----|--|---|
| ANS | 409 | Problems, Controversies and Advancements in Reproduction (W) | 4 |
|-----|-----|--|---|
- (m) Add the following concentration:
- Equine Industry** (27 to 29 credits)
1. All of the following courses (18 credits):
- |     |      |                                      |   |
|-----|------|--------------------------------------|---|
| ANS | 200D | Introduction to Horse Judging        | 2 |
| ANS | 225  | Horse Behavior, Welfare and Ethics   | 2 |
| ANS | 242  | Introductory Horse Management        | 3 |
| ANS | 340  | Equine Business and Entrepreneurship | 3 |
| ANS | 442  | Advanced Horse Management            | 3 |
| ANS | 443  | Equine Nutrition                     | 3 |

	ANS	448	Equine Science Seminar	2
	ANS 242 may be used to fulfill major requirement 3.d. above.			
2.	One of the following handling courses (2 or 3 credits):			
	ANS	140	Fundamentals of Horsemanship	2
	ANS	145	Horse Handling	3
	ANS	141L	Draft Horse Basics	2
3.	Choose a learning track (7 to 9 credits):			
	<i>Equine Assisted Services</i> (8 credits)			
	All of the following (5 credits)			
	ANS	249	Methods of Instructing Safe Horsemanship	2
	ANS	341	Introduction to Equine Assisted Services	3
	One of the following (3 credits):			
	REL	185	Introduction to Religion and Nonprofits	3
	REL	285	Introduction to Social Entrepreneurship and Religion	3
	WRA	453	Grant and Proposal Writing	3
	<i>Equine Business and Allied Industries</i> (9 credits)			
	Both of the following (6 credits)			
	ACC	230	Survey of Accounting Concepts	3
	AFRE	130	Farm Management I	3
	One of the following (3 credits):			
	CSUS	473	Social Entrepreneurship and Community Sustainability	3
	ESHP	170	Business Model Design and Prototyping	3
	ESHP	190	Introduction to Entrepreneurship	3
	<i>Equine Health and Nutrition</i> (7 credits)			
	ANS	347	Equine Health	3
	ANS	445	Equine Exercise Physiology	4
	<i>Equine Trainer and Instructor</i> (8 credits)			
	The following course (4 credits)			
	ANS	445	Equine Exercise Physiology	4
	Two of the following courses (4 credits):			
	ANS	246	Young Horse Handling	2
	ANS	249	Methods of Instructing Safe Horsemanship	2
	ANS	346	Starting Horses Under Saddle I	2
	ANS	446	Starting Horses Under Saddle II	2

Effective Fall 2025.

5. Change the requirements for the **Master of Science** degree in **Biosystems Engineering** in the Department of Biosystems and Agricultural Engineering. The University Committee on Graduate Studies (UCGS) approved this request at its February 17, 2025 meeting.
  - a. Under the heading **Admission** make the following change under **Regular Status**:
    - (1) In paragraph two, delete Biosystems Engineering 825.
  - b. Under the heading **Requirements for the Master of Science Degree in Biosystems Engineering** make the following change:
    - (1) Under the heading **Requirements for Both Plan A and Plan B**, add the following item 4.:
      4. Complete one course in biological science at MSU at the 400-level or above. An approved list of courses will be maintained by the department. This requirement may be waived for students who have previously completed an equivalent course.

Effective Fall 2025.

6. Change the requirements for the **Doctor of Philosophy** degree in **Biosystems Engineering** in the Department of Biosystems and Agricultural Engineering. The University Committee on Graduate Studies (UCGS) approved this request at its February 17, 2025 meeting.

a. Under the heading **Admission** make the following change under **Provisional Status**:

- (1) Replace paragraph two with the following:

A student who is admitted to the Doctor of Philosophy degree program without a Bachelor of Science or Master of Science degree in engineering may be required to complete collateral courses, and/or courses in addition to the core required courses for the doctoral degree. If collateral courses are required, they will be specified on the admission form. Biosystems Engineering 490 and 890 may not be used to satisfy collateral course requirements.

b. Under the heading **Requirements for the Doctor of Philosophy Degree in Biosystems Engineering** make the following changes:

- (1) Delete item 6.  
(2) Renumber items 7., 8., 9., and 10. to 6., 7., 8., and 9. respectively.  
(3) Add the following item 6.:

Pass the doctoral comprehensive examination within two years of the date of first course enrollment that counts to the student's program of study. The examination may be retaken once in the following semester.

Effective Fall 2025.

7. Establish a **Master of Science** degree in **Packaging Leadership for Professionals** in the School of Packaging. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its January 27, 2025 meeting.

a. **Background Information:**

Most companies producing goods utilize packaging and either hire packaging graduates or work closely with packaging companies. Job demand continues to outstrip supply of graduates and is projected to continue into the future.

There exist only a handful of 4-year degree granting packaging programs in the U.S., graduating less than 400 total students each year (source: estimates from packaging program chairpersons, 2022), of which between 35-40% come from MSU. The packaging degree is not accredited from an external agency like an engineering degree. As of May 2024, MSU will be the only online MS degree offered in the U.S., as Cal Poly's online MS program will close despite steady enrollment of 20-25 students per year (source: Orfalea College of Business, External program review, 2022).

There are no known online MS packaging programs offered in Europe or Asia, and only one in Mexico focused exclusively on packaging design. Our flexible offering will have no rival in global higher education.

In recent years, and accelerated during the recent pandemic (2020-2022), a significant global shift has occurred spurred in part by consumer sentiment, legislative efforts, and company sustainability goal commitments. Many companies now are grappling with a need for talent that understands both packaging leadership and the business implications. Solutions that replace existing materials or offer more environmentally friendly end-of-life scenarios can be complex and require cross-discipline effort to address.

Over several years many companies have requested new training and curriculum from accredited institutions (even if specific programs are not accredited) to address employee skill gaps, specifically, blended degrees that better address the convergence of technology, sustainability and business leadership. Packaging leadership is a complex topic involving R&D, material procurement, marketing, supply chain and business considerations as companies move from traditional petro-based materials to new sources. The market is in an early phase of growing pains to develop



solutions that meet customer demands for product safety and environmental goals, while simultaneously meeting company quality, profitability and product availability goals. How to do this profitably while simultaneously meeting meaningful sustainability goals is a complex problem requiring the blending of disciplines.

The current MSU offering is a narrowly focused technical degree offered both online and in-person. It is a non-thesis option focused on deep technical expertise in materials and analytic techniques geared towards career R&D employees or engineers. As a result of this narrow focus the program has had steady but limited enrollment. Cal Poly has offered an online packaging MS program focused on supply chain trade-offs (called “value chain”) for several years with good success, reaching a steady 20-25 student enrollment. However, Cal Poly made a strategic decision to exit the online packaging MS offering in May 2024 to focus exclusively on in-person teaching, leaving MSU as one of the only known online MS packaging programs in the world.

Although there are some industry trade group educational offerings (non-credit) offered online, including for-profit TPS, none of these are for-credit, transcriptable degrees and are focused mainly on undergraduate-level content.

Our industry advisory board and discussions with companies and packaging programs around the world have led to the projected enrollment goal that ramps to 45+ students enrolled per year after a five-year period.

MSU is home to the first and largest Packaging program in higher education, graduating the greatest number of packaging engineers each year in the U.S. MSU is also home to the top ranked Supply Chain program and a top 20 business school. Partnering with The Eli Broad College of Business and Graduate School of Management will bring a compelling offering to the market combining elements of MSU top programs to meet articulated needs from industry.

We are best positioned to expand on our current MS online offering, leveraging our brand recognition and large alumni base, and leveraging our existing online MS program.

b. **Academic Programs Catalog Text:**

The Master of Science degree in Packaging Leadership for Professionals is a course-intensive, online program offered by the School of Packaging in partnership with The Eli Broad College of Business and Graduate School of Management and College of Communication Arts and Sciences. The master's program enables professionals with leadership aspirations to expand their knowledge related to technical aspects of packaging and also strengthen their proficiencies in interdisciplinary fields in which students engage in one of four concentrations: business, supply chain management, sustainable solutions, or packaging design.

**Admission**

To be eligible for admission to the degree, students must:

1. have an earned bachelor's degree with a minimum of 3.0 cumulative grade-point average from an accredited educational institution comparable to a four-year U.S. bachelor's degree.
2. have a minimum of three years of professional work experience.
3. submit three reference letters.
4. submit official transcripts from all academic institutions attended.
5. submit a resume or CV.

**Requirements for the Master of Science Degree in Packaging Leadership for Professionals**

The Master of Science degree program in Packaging Leadership for Professionals is available only under Plan B (without thesis) and available only online. A total of 30 credits is required for the degree under Plan B. The student's program of study must be approved by the graduate program director.

			CREDITS
1.	Complete all of the following core courses (20 credits):		
	PKG 470	Packaging Sustainability	3
	PKG 801	Packaging Materials	4
	PKG 803	Packaging Distribution and Dynamics	2

- |    |  |     |   |        |
|----|--|-----|---|--------|
|    | PKG  | 804 | Packaging Processes   | 2      |
|    | PKG  | 810 | Packaging Professional Seminar  | 3      |
|    | PKG  | 875 | Stability and Recyclability of Packaging Materials                            | 3      |
|    | PKG  | 891 | Selected Topics   |        |
|    |  |     | Section: Global Sustainability Trends and Regulations Capstone                | 3      |
|    | The capstone must be completed during the last 10 credits of the program.  |     |   |        |
| 2. | Complete a minimum of 10 credits from one of the following concentrations: |     |   |        |
|    | <b>Business</b>  |     |   |        |
|    | ACC  | 870 | Principles of Financial and Managerial Accounting                             | 3      |
|    | CAS  | 835 | Branding and Image Communication  | 3      |
|    | MGT  | 873 | Strategic Decision Making   | 2      |
|    | SCM  | 801 | Introduction to Global Business and Supply Chain                              | 2      |
|    | <b>Supply Chain Management</b>   |     |   |        |
|    | PKG  | 465 | Packaging Value Chain   | 3      |
|    | SCM  | 801 | Introduction to Global Business and Supply Chain                              | 2      |
|    | SCM  | 803 | Introduction to Supply Chain Analytics  | 3      |
|    | SCM  | 805 | Basic Elements of Strategic Sourcing  | 2      |
|    | SCM  | 806 | Basic Elements of Logistics and Warehousing                                   | 2      |
|    | SCM  | 807 | Basic Elements of Operations Management                                       | 2      |
|    | <b>Sustainable Solutions</b>   |     |   |        |
|    | AFRE   | 891 | Topics in Agricultural, Food, and Resource Economics                          | 1 to 3 |
|    | CSUS   | 465 | Environmental and Natural Resource Law  | 3      |
|    | CSUS   | 890 | Independent Study in Community Sustainability                                 | 1 to 6 |
|    | CSUS   | 891 | Selected Topics in Community Sustainability                                   | 1 to 9 |
|    | PKG  | 465 | Packaging Value Chain   | 3      |
|    | PKG  | 480 | Packaging Laws and Regulations  | 3      |
|    | PKG  | 880 | Life Cycle Assessment: Background, Principles, Calculations, and Applications | 3      |
|    | <b>Packaging Design</b>  |     |   |        |
|    | FSC  | 810 | International Food Laws and Regulations                                       | 3      |
|    | FSC  | 811 | U.S. Food Laws and Regulations  | 3      |
|    | PKG  | 411 | Packaging Development Technology  | 3      |
|    | PKG  | 430 | Packaging for Fast-Moving Consumer Goods                                      | 3      |
|    | PKG  | 421 | Virtual Design and Prototyping  | 3      |
|    | PKG  | 444 | Radio Frequency Identification (RFID) for Packaging                           | 3      |
|    | PKG  | 450 | Automotive and Industrial Packaging   | 3      |
|    | PKG  | 452 | Medical Packaging   | 4      |
|    | PKG  | 456 | Packaging and Shelf Life of Perishable Food                                   | 3      |
|    | PKG  | 480 | Packaging Laws and Regulations  | 3      |
|    | PKG  | 805 | Advanced Packaging Dynamics   | 3      |
|    | PKG  | 814 | Packaging for Food Safety   | 3      |
|    | PKG  | 815 | Permeability and Shelf Life   | 3      |
|    | PKG  | 825 | Polymeric Packaging Materials   | 4      |
|    | PKG  | 840 | Anti-Counterfeit Strategy and Product Protection                              | 3      |
|    | VM   | 834 | Current Issues in Food Safety   | 1 to 3 |
| 3. | Complete the responsible conduct of research training.                     |     |   |        |
| 4. | Completion of a final examination or evaluation.                           |     |   |        |

Effective Fall 2025.

8. Change the requirements for the **Master of Science** degree in **Packaging** in the School of Packaging. The University Committee on Graduate Studies (UCGS) approved this request at its February 17, 2025 meeting.

- a. Under the heading **Requirements for the Master of Science Degree in Packaging** make the following changes:
- (1) Under the heading **Additional Requirements for Plan A** make the following changes:
- (a) Replace item 1. with the following:
- Packaging 810 and 825.
- (b) In item 3., delete Packaging 888.
- (2) Under the heading **Additional Requirements for Plan B** make the following changes:
- (a) Replace item 1. with the following:
- Packaging 805, 810, 815, and 825.
- (b) In item 2., delete Packaging 888.

Effective Fall 2025.

9. Change the requirements for the **Doctor of Philosophy** degree in **Packaging** in the School of Packaging. The University Committee on Graduate Studies (UCGS) approved this request at its February 17, 2025 meeting.

- a. Under the heading **Requirements for the Doctor of Philosophy Degree in Packaging** make the following changes:
- (1) In item 2., delete the following course:
- |     |     |                  |   |
|-----|-----|------------------|---|
| PKG | 860 | Research Methods | 3 |
|-----|-----|------------------|---|
- Add the following course:
- |     |     |                                |   |
|-----|-----|--------------------------------|---|
| PKG | 810 | Packaging Professional Seminar | 3 |
|-----|-----|--------------------------------|---|

Effective Fall 2025.

### **COLLEGE OF COMMUNICATION ARTS AND SCIENCES**

1. Establish a **Graduate Certificate** in **Documentary Film** in the Department of Journalism. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its January 27, 2025 meeting.

- a. **Background Information:**

The School of Journalism offers a Master of Arts Degree in Journalism, in addition to undergraduate B.A. programs in Journalism and Digital Storytelling and a doctoral program as part of the Information and Media Ph.D. program in the College of Communication Arts and Sciences. It also administers the Minor in Documentary Production with partners in the Department of English and the Department of Writing, Rhetoric, and American Cultures.

The Documentary Production undergraduate minor moved to the School of Journalism in Fall 2021 when instructors and their courses moved departments from Media and Information to the School of Journalism and a new program, Digital Storytelling, was created as the lead partner of the minor.

The addition of courses and faculty to the School coincided with an increase in interest among students in the Journalism M.A. program in documentary filmmaking, and the School regularly receives interests from students in the Digital Storytelling program who are looking at graduate programs. Students in the Journalism M.A. program now regularly take 400-level courses in documentary filmmaking. Students in the Ph.D. program also have expressed interest in studying documentary filmmaking.

The creation of a graduate certificate in Documentary Film would allow for increased specialization for students in these graduate programs, as well as a venue for students across university programs and outside the university to study Documentary Film at the graduate level.

b. **Academic Programs Catalog Text:**

The Graduate Certificate in Documentary Film provides graduate students with the history, theories and frameworks needed to design, develop, produce and distribute documentaries that they create using video, audio, still photography, web design, and print media. Students will engage in the pre-production, production and post-production phases and gain experience as a director, producer, cinematographer, audio specialist, researcher or other integral member of a documentary film team.

**Admission**

To be considered for admission to the Graduate Certificate in Documentary Film, students must:

1. Have a completed bachelor's degree.
2. Submit an academic statement of no more than 500 words that clearly describes the applicant's reasons for pursuing the certificate and the goals that the certificate will help them attain.

For additional information, refer to the *Admission* section in the *Graduate Education* section of this catalog.

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

CREDITS

Students must complete 9 credits from the following:

1. Students must complete 6 credits, spread across two semesters in the following courses:
 

JRN	811A	Advanced Documentary Filmmaking I	3
JRN	811B	Advanced Documentary Filmmaking II	3
2. Complete 3 credits from the following:
 

JRN	403	Broadcast News II: Intermediate Reporting	3
JRN	404	Sports Broadcast and Production	4
JRN	406A	Broadcast News III: Advanced Reporting	4
JRN	406B	Broadcast News Producing	4
JRN	407	Advanced Reporting	3
JRN	418	Advanced Sports Reporting	3
JRN	412	Scoring for Moving Pictures	3
JRN	413	3D Animation Storytelling	3
JRN	800	Multiple Media Reporting I	3
JRN	801	Multiple Media Reporting II	3
JRN	810	Visual Journalism	3
DS	409	Advanced Lighting and Camera Techniques	3
DS	440	Advanced Video Editing	3
DS	441	Filmmaking III: Advanced Filmmaking Capstone (W)	3
DS	442A	Multicam Production for Arts (W)	3
DS	442B	Multicam Production for Sports (W)	3
DS	442C	Multicam Production for News (W)	4
DS	492C	Digital Storytelling Special Topics in Filmmaking	1 to 6

### COLLEGE OF EDUCATION

1. Change the requirements for the **Graduate Certificate in Special Education Leadership: Multi-Tiered Systems of Support** in the Department of Counseling, Educational Psychology, and Special Education. The University Committee on Graduate Studies (UCGS) approved this request at its February 17, 2025 meeting.
  - a. Under the heading **Requirements for the Graduate Certificate in Special Education Leadership: Multi-Tiered Systems of Support** make the following changes:
    - (1) In item 1., delete the following course:

CEP	803A	Assessment of Students with Mild Disabilities	3
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Add the following course:

CEP	825	Capstone in Multi-Tiered Systems of Support	3
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- Effective Fall 2025.
2. Change the name of the **Master of Science** degree in **Sport Coaching, Leadership and Administration** in the Department of Kinesiology to **Applied Sport Sciences**.

Effective Fall 2025, no new students are to be admitted to the Master of Science Degree in Sport Coaching, Leadership and Administration. Effective Fall 2025, no students are to be readmitted to the Master of Science Degree in Sport Coaching, Leadership and Administration. Effective Fall 2025, coding for the Master of Science Degree in Sport Coaching, Leadership and Administration will be discontinued and the program will no longer be available in the Department of Kinesiology. Effective Fall 2025, students admitted to the major will be awarded a Master of Science Degree in Applied Sport Sciences.
3. Change the requirements in the **Master of Science** degree in **Applied Sport Sciences** in the Department of Kinesiology.
  - a. Under the heading **Admission** make the following changes:
    - (1) In the first paragraph, add the following:
      5. submit a current professional resume no longer than 2 pages.
    - (2) In the third paragraph, add the following:
      4. Relevant career experiences, including employment, internships, or field experiences.
  - b. Under the heading **Requirements for the Master of Science Degree in Applied Sport Sciences** replace the entire entry with the following:
    1. All of the following courses (3 credits):

KIN	852	Ethics for the Sport Practitioner	1
KIN	896	Capstone in the Applied Sport Sciences	2
    2. Complete 27 credits from one of the following concentrations:**Coaching**
      - a. The following course (3 credits):

KIN	872	Orientation to the Sport Professions	3
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      - b. Two of the following Physical Cognate courses (6 credits):

KIN	819	Advanced Sports Nutrition	3
KIN	829	Safety and Injury Control	3
KIN	856	Physical Bases of Coaching Athletes	3
KIN	861	Growth, Maturation, and Physical Activity	3
KIN	865	Stages of Athlete Development	3
KIN	868	Skill Development in Athletes	3
      - c. Two of the following Psychosocial Cognate courses (6 credits):

	KIN	846	Sociocultural Issues for Sport Practitioners	3
	KIN	849B	Organizational Behavior in Sport	3
	KIN	849	Theory and Practice of Modern Sport Leadership	3
	KIN	855	Psychosocial Bases of Coaching Athletes	3
	KIN	855P	Psychosocial Aspects of Athletic Performance	3
	KIN	857	Promoting Positive Youth Development Through Sport	3
d.	One of the following Administration Cognate courses (3 credits):			
	KIN	851F	The Sport Enterprise: Sport Finance	3
	KIN	851M	The Sport Enterprise: Sport Marketing	3
	KIN	853	Athletic Administration and Governance	3
	KIN	854	Legal Aspects of Sport	3
	KIN	858	Collegiate Athlete Development	3
e.	Complete two additional 3-credit Kinesiology courses approved by the student's academic advisor.			
f.	Complete one of the following courses (3 credits):			
	KIN	875B	Applied Sport Analytics	3
	KIN	880	Practicum in Sport Coaching	3
	KIN	893	Internship in Kinesiology	3
<b>Sport Management</b>				
a.	The following course (3-credits):			
	KIN	872	Orientation to the Sport Professions	3
b.	Four of the following courses (12 credits):			
	KIN	849B	Organizational Behavior in Sport	3
	KIN	849	Theory and Practice of Modern Sport Leadership	3
	KIN	851F	The Sport Enterprise: Sport Finance	3
	KIN	851M	The Sport Enterprise: Sport Marketing	3
	KIN	853	Athletic Administration and Governance	3
	KIN	854	Legal Aspects of Sport	3
c.	One of the following courses (3 credits):			
	KIN	875B	Applied Sport Analytics	3
	KIN	893	Internship in Kinesiology	3
d.	Complete three additional 3-credit Kinesiology courses approved by the student's academic advisor.			
<b>Strength and Conditioning</b>				
a.	All of the following courses (9 credits):			
	KIN	815	Essentials of Strength and Conditioning	3
	KIN	815B	Essentials of Strength and Conditioning II	3
	KIN	819	Advanced Sport Nutrition	3
b.	One of the following courses (3 credits)			
	KIN	872	Orientation to the Sport Professions	3
	KIN	874	Skepticism and Inquiry in the Sport Sciences	3
c.	One of the following Psychosocial Cognate courses (3 credits):			
	KIN	846	Sociocultural Issues for Sport Practitioners	3
	KIN	849B	Organizational Behavior in Sport	3
	KIN	849	Theory and Practice of Modern Sport Leadership	3
	KIN	855	Psychosocial Bases of Coaching Athletes	3
	KIN	855P	Psychosocial Aspects of Athletic Performance	3
	KIN	857	Promoting Positive Youth Development Through Sport	3
d.	One of the following Administration Cognate courses (3 credits):			
	KIN	851F	The Sport Enterprise: Sport Finance	3
	KIN	851M	The Sport Enterprise: Sport Marketing	3
	KIN	853	Athletic Administration and Governance	3
	KIN	854	Legal Aspects of Sport	3
	KIN	858	Collegiate Athlete Development	3
e.	One of the following courses (3 credits):			
	KIN	875B	Applied Sport Analytics	3
	KIN	880	Practicum in Sport Coaching	3

- |    |  |     |                           |   |
|----|--|-----|---------------------------|---|
|    | KIN  | 893 | Internship in Kinesiology | 3 |
| f. | Complete two additional 3-credit Kinesiology courses approved by the student's academic advisor. |     |                           |   |
| 3. | Completion of a final examination or evaluation.   |     |                           |   |

Effective Fall 2025.

4. Change the requirements for the **Graduate Certificate in Sport Coaching** in the Department of Kinesiology. The University Committee on Graduate Studies (UCGS) approved this request at its February 17, 2025 meeting.
  - a. Under the heading **Admission**, in the fourth paragraph, add the following:
    4. Relevant career experiences, including employment, internships, or field experiences.
  - b. Under the heading **Requirements for the Graduate Certificate in Sport Coaching** make the following changes:
    - (1) In item 2. add the following courses:
 

KIN	819	Advanced Sports Nutrition	3
KIN	861	Growth, Maturation, and Physical Activity	3
    - (2) In item 3. add the following courses:
 

KIN	849B	Organizational Behavior in Sport	3
KIN	855P	Psychosocial Aspects of Athletic Performance	3

Effective Fall 2025.

5. Change the name of the **Graduate Certificate in Sport Leadership and Administration** in the Department of Kinesiology to **Sport Leadership and Management**.

Effective Fall 2025, no new students are to be admitted to the Graduate Certificate in Sport Leadership and Administration. Effective Fall 2025, no students are to be readmitted to the Graduate Certificate in Sport Leadership and Administration. Effective Fall 2025, coding for the Graduate Certificate in Sport Leadership and Administration will be discontinued and the program will no longer be available in the Department of Kinesiology. Effective Fall 2025, students admitted to the major will be awarded a Graduate Certificate in Sport Leadership and Management.

6. Change the requirements in the **Graduate Certificate in Sport Leadership and Management** in the Department of Kinesiology.
  - a. Under the heading **Admission** make the following changes:
    - (1) In the second paragraph, add the following and renumber item 5. to item 6.:
      5. submit two letters of recommendation, one from a professional source (colleague, supervisor), and one from an academic source (instructor, advisor).
  - b. Under the heading **Requirements for the Graduate Certificate in Sport Leadership and Management** replace the entire entry with the following:
    1. The following course (1 credit):
 

KIN	852	Ethics for the Sport Practitioner	1
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    2. Four of the following courses (12 credits):
 

KIN	849	Theory and Practice of Modern Sport Leadership	3
KIN	849B	Organizational Behavior in Sport	3
KIN	851F	The Sport Enterprise: Sport Finance	3

KIN	851M	The Sport Enterprise: Sport Marketing	3
KIN	853	Athletic Administration and Governance	3
KIN	854	Legal Aspects of Sport	3

Effective Fall 2025.

7. Establish a **Master of Arts** degree in **World Language Teaching and Curriculum** in the Department of Teacher Education. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its January 27, 2025 meeting.

a. **Background Information:**

This program was established back in 2008 as the Chinese Language Teacher Certification program that has been sandwiched into the Master of Arts in Teaching and Curriculum. With the expansion into additional world languages, it is time to develop it into a standalone program.

The Post BA World Language Teacher Certification Program with a Master of Arts in World Language Teaching and Curriculum and Michigan Teacher Certification is designed for students who have an undergraduate or graduate degree and wish to become state certified world language teachers. The program aims to increase the number of certified PreK-12 world language students coming from MSU to address a nationwide and statewide shortage of world language educators.

Currently, there are relatively few institutions across the country that offer master's degree programs that also result in state certification for world language teachers and even less that offer a residency model. This provides an expedited way to for perspective teachers to receive certification to teach a world language, fulfilling a critical need. Additionally, this residency model supports its teacher candidates as they complete a mentored internship and then induction support as a first-year teacher.

Although MSU does have methods to certify post-baccalaureate students, it currently accomplishes it through further undergraduate programming that does not result in additional degrees. The main undergraduate teacher preparation program is moving to a 4-year pathway. There is evidence that some students are unable to develop sufficient language proficiency while also completing their degree requirements and teacher education course work within this 4-year time span. This program remedies that concern by providing state certification for World Languages as well as a master's degree from MSU and the College of Education. Public education in the State of Michigan and across the country is facing a significant shortage of qualified language teachers. Through this program having a history of certifying language teachers, moving this to a stand alone MA program is the next step.

b. **Academic Programs Catalog Text:**

The Master of Arts degree program in World Language Teaching and Curriculum is designed principally for people who wish to acquire secondary teaching certification (PK-12 language endorsement) while acquiring advanced professional knowledge related to language teaching and curriculum.

To be certified as a teacher, candidates must complete all relevant course work with individual course grades of a 3.0 or higher. Candidates will also have to pass state certification tests and meet other state and program requirements. Interested candidates should schedule a meeting with the program personnel for more details.

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

**Admission**

Applications for admissions to the master's program are reviewed by faculty who look for evidence of appropriate preparation for both advanced disciplinary and professional study at the master's level and likelihood of successful teaching as indicated by an applicant's prior educational record, tutoring/teaching experience, work experience, statement of professional goals, letters of recommendation and professional essay.



To be eligible for admission to the degree, students must:

1. have an earned bachelor's degree with a cumulative undergraduate grade-point average of 2.5 from an accredited educational institution. Students must maintain an overall 2.5 grade-point average with no individual grade below a 2.5 to be considered for teacher certification.
2. have a major or minor in the language or language proficiency at an Intermediate High level on the ACTFL OPI/WPT tests to be considered for licensure.
3. submit three letters of recommendation.
4. submit official transcripts from all academic institutions attended.
5. disclose tutoring, teaching and work experience.
6. provide a statement of professional goals.
7. submit a professional essay.

### **Requirements for the Master of Arts Degree in World Language Teaching and Curriculum**

The Master of Arts degree program in World Language Teaching and Curriculum is available only under Plan B (without thesis). A total of 31 credits is required for the degree under Plan B. The student's program of study must be approved by the graduate program director.

			CREDITS
1.	All of the following courses (25 credits):		
	CEP	891 Special Topics in Educational Psychology and Educational Technology	
		Section: Social-Emotional Development of School-Age Youths	3
	TE	818 Curriculum in Its Social Context	3
	TE	832A World Language Teaching Methods I	3
	TE	832B World Language Teaching Methods II	1
	TE	833 Classroom Management in American Schools	3
	TE	842 Advanced Methods of Elementary School Reading	3
	TE	843 Secondary Reading Assessment and Instruction	3
	TE	884A Internship and Field Experiences in World Language Teaching I	2
	TE	884B Internship and Field Experiences in World Language Teaching II	2
	TE	884C Internship and Field Experiences in World Language Teaching III	1
	TE	884D Internship and Field Experiences in World Language Teaching IV	1
2.	One of the following courses (3 credits):		
	TE	807 Professional Development and Inquiry	3
	TE	808 Inquiry into Classroom Teaching and Learning	3
3.	One of the following courses (3 credits):		
	TE	870 Curriculum Design, Development and Deliberations in Schools	3
	TE	872 Teachers as Teacher Educators	3
4.	Submit a professional portfolio as developed throughout the program.		

Effective Fall 2025.

## COLLEGE OF ENGINEERING

1. Change the requirements in the **Bachelor of Science** degree in **Chemical Engineering** in the Department of Chemical Engineering and Materials Science. The University Committee on Undergraduate Education (UCUE) approved this request on February 6, 2025.

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

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

- (1) In item 3. a., change the total credits from '58' to '54' and delete the following course:

CEM	151	General and Descriptive Chemistry	4
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Add the following note:

Note: Students must have a minimum grade-point of 2.0 in CHE 201.

- b. Under the heading **Concentrations in Chemical Engineering** make the following changes:

- (1) Under the **Biochemical Engineering** concentration, change all 'MMG' courses to 'MGI'.

- (2) Under the **Biomedical Engineering** concentration make the following changes:

- (a) Change all 'MMG' courses to 'MGI'.

- (b) Under 'One of the following courses (3 credits);', add the following course:

BME	860	NanoEngineering in Biomedicine	3
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- (c) Under 'One of the following courses not taken above (3 or 4 credits);', delete the following course:

BMB	471	Advanced Biochemistry Laboratory	4
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Add the following courses:

ANTR	350	Human Gross Anatomy for Pre-Health Professionals	4
BME	860	NanoEngineering in Biomedicine	3

- (3) Under the **Environmental** concentration replace the entire entry with the following:

### **Environmental**

To earn a Bachelor of Science degree in Chemical Engineering with an environmental concentration, the student must complete requirements 1., 2., and 3. a., 3.b., and 3.d. above and the following:

Both of the following courses (6 credits):

CHE	481	Biochemical Engineering	3
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ENE	380	Principles of Environmental Engineering and Science	3
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Three of the following courses (9 credits):

CSS	865	Environmental Organic Chemistry	3
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ENE	381	Environmental Chemistry	3
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ENE	483	Water and Wastewater Engineering	3
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ENE	489	Air Pollution: Science and Engineering	3
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GBL	480	Environmental Law and Sustainability for Business: From Local to Global	3
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GLG	421	Environmental Geochemistry	4
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IBIO	446	Environmental Issues and Public Policy	3
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- (4) Under the **Food Science** concentration make the following changes:

- (a) Change 'MMG 301' to 'MGI 301'.

(b) Under 'One of the following courses (3 credits):', add the following courses:

CEM	482	Science and Technology of Wine Production	3
CHE	483	Brewing and Distilled Beverage Technology	3
FSC	481	Fermented Beverages	3

Effective Fall 2025.

### **COLLEGE OF NATURAL SCIENCE**

1. Establish a **Minor in Environmental Science** in the Department of Earth and Environmental Sciences. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its January 23, 2025 meeting.

a. **Background Information:**

Environmental Science is a growing field, with increasing domains and disciplines of application across sciences, engineering, and natural resource fields. Despite its importance, MSU does not have an Environmental Science degree. Existing programs approach the environment from either humanities or engineering perspectives: Major in Environmental Studies and Sustainability (offered by Community Sustainability, CSUS), Major in Environmental Engineering (offered by Civil and Environmental Engineering), and a Minor in Environmental Studies and Sustainability (offered by the RISE program). Environmental Science is distinguished from these other Environmental programs in its focus on observation, description, modeling, and prediction of behavior of natural systems, which provides preparation for career paths that expect quantitative and systems reasoning about environmental problems.

A Minor in Environmental Sciences will provide enhanced educational background for students in all environment-related programs at MSU, and others interested in adding an Environmental Sciences focus. This program aligns with MSU's mission and fills a longstanding gap in its transcriptable offerings. Peer institutions such as Arizona State University, Wayne State University, University of Arizona, University of Massachusetts-Amherst, and University of Minnesota-Duluth offer Minor programs in Environmental Science.

The minor is ideally suited for the Department of Earth and Environmental Sciences to offer. Our courses and faculty span much of the range of more traditional disciplines encompassed by the Environmental Sciences (e.g. Ecology, Hydrology, Geoscience, Geochemistry). The minor complements forthcoming updates to our EES major(s), but will not be open to EES majors due to content overlap.

Students will be prepared with the knowledge, skills, and experience to succeed and make an impact in their academic and professional careers. Specifically, this minor seeks to provide knowledge and experience in: a) a broad solid foundation in the Environmental Sciences, b) environmental biology, c) environmental chemistry, and d) environmental systems science. Many of these classes include laboratory experiences, and some fieldwork—critical experiential learning opportunities. The Minor in Environmental Science is particularly aligned with the University learning goals related to Analytical Thinking.

Upon completing the Minor, students will be able to apply biology, chemistry, and systems reasoning to environmental phenomena and problems. Students will observe natural phenomena, record data, and model processes. Students will be able to evaluate hypotheses, interpret literature, and effectively communicate scientific measurements.

b. **Academic Programs Catalog Text:**

The Minor in Environmental Science, administered by the Department of Earth and Environmental Sciences, provides foundational training for students interested in environmental sciences. After a broad introductory course, it offers a menu of courses that focus on the biology/ecology, chemistry, and systems components of environmental science.

The Minor is available as an elective to students outside of the Department of Earth and Environmental Sciences enrolled in bachelor's degree programs at Michigan State University. With the approval of the department and college that administer the student's degree program, the courses that are used to satisfy the Minor may also be used to satisfy the requirements for the bachelor's degree. However, at least 6 credits counted towards the requirements for this Minor must be unique. Unique credits must not be used to fulfill another university, college, or major requirement in the student's program.

Students who plan to complete the requirements for the Minor should consult the undergraduate advisor in the Department of Earth and Environmental Sciences.

### Requirements for the Minor in Environmental Science

CREDITS

Students must complete a minimum of 15 credits, with at least 10 credits in GLG:

1. One of the following courses (4 credits):
 

GLG	200	Introduction to Environmental Science and Global Change	4
GLG	201	Introduction to Earth and Planetary Sciences	4
2. One of the following environmental biology and ecology courses (3 or 4 credits):
 

FOR	340	Forest Ecology	3
FW	410	Upland Ecology and Management	3
FW	416	Marine Ecology and Management	3
FW	417	Wetland Ecology and Management	3
FW	420	Stream Ecology	3
GLG	304	Physical and Biological History of the Earth	4
GLG	435	Geomicrobiology (W)	4
GLG	446	Ecosystems Modeling, Water and Food Security	3
IBIO	355	Ecology	3
3. One of the following environmental chemistry courses (4 credits):
 

GLG	321	Mineralogy and Geochemistry	4
GLG	421	Environmental Geochemistry	4
4. One of the following environmental systems courses (3 or 4 credits):
 

GEO	306	Environmental Geomorphology	3
GLG	303	Oceanography	4
GLG	330	Biogeochemistry	3
GLG	380	Natural Resources, the Energy Transition and the Environment	3
GLG	411	Hydrogeology	3
GLG	412	Glacial Geology and the Record of Climate Change	4
GLG	431	Sedimentology and Stratigraphy	4

Effective Fall 2025.

2. Establish a **Minor in Geophysics** in the Department of Earth and Environmental Sciences. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its January 9, 2025 meeting.

a. **Background Information:**

Geophysics training is highly valuable to industry employers as well as graduate schools in Earth and Environmental Science areas. For decades the Department of Earth and Environmental Sciences has offered a Concentration in Geophysics as an option in our two major programs: Geological Sciences and Environmental Geosciences. This Concentration was designed to allow students to develop and demonstrate depth of training in quantitative reasoning applied to Earth and environmental systems. It has appealed particularly to students who transfer to Geological Sciences or Environmental Geosciences majors from Engineering or Physics, and have already met the requirements for additional math and physics beyond our standard curriculum. However, that audience has been small, and we have struggled to maintain consistent enrollment in our two core geophysics courses, GLG 470 and 471. We have found that in practice, Engineering or Physics students are reluctant to change their major or double-major because of the extra time in school that would be required.

The proposed Minor would replace the Concentration in Geophysics but be open to a broader audience. It will include foundational course work in Earth and planetary science as well as calculus and physics and upper-level geophysics courses. It was designed so that students who continue to major in Engineering or Physics and also choose this Minor would have enough earth science background to be competitive for admission into a Geophysics graduate program. The Minor also still provides a clear path toward their degree for Earth and Environmental Science majors who are interested in Geophysics.

**b. Academic Programs Catalog Text:**

The Minor in Geophysics, administered by the Department of Earth and Environmental Sciences, provides interdisciplinary training for students interested in applying physical properties of the Earth and Earth materials to planetary and environmental problems.

The minor is available as an elective to students enrolled in bachelor's degree programs at Michigan State University. With the approval of the department and college that administer the student's degree program, the courses that are used to satisfy the minor may also be used to satisfy the requirements for the bachelor's degree. However, at least 6 credits counted towards the requirements for this minor must be unique. Unique credits must not be used to fulfill another university, college, or major requirement in the student's program.

Students who plan to complete the requirements for the minor should consult the undergraduate advisor in the Department of Earth and Environmental Sciences.

**Requirements for the Minor in Geophysics**

				CREDITS
Students must complete a minimum of 27 credits from the following:				
1.	One of the following options, either a. or b.:			
	a.	MTH 234	Multivariate Calculus	4
		or		
		LB 220	Calculus III	4
		PHY 183	Physics for Scientists and Engineers I	4
		PHY 184	Physics for Scientists and Engineers II	4
	b.	MTH 234	Multivariate Calculus	4
		or		
		LB 220	Calculus III	4
		PHY 183	Physics for Scientists and Engineers I	4
		or		
		LB 273	Physics I	4
		PHY 184	Physics for Scientists and Engineers II	4
		or		
		LB 274	Physics II	4
2.	One of the following courses (3 or 4 credits)			
	CMSE	202	Computational Modeling and Data Analysis II	4
	MTH	235	Differential Equations	3
	MTH	314	Matrix Algebra with Computational Applications	3
3.	One of the following courses (3 or 4 credits)			
	GLG	201	Introduction to Earth and Planetary Sciences	4
	GLG	203	Geology of the Great Lakes Region	3
4.	Three of the following courses (9 or 10 credits)			
	GLG	411	Hydrogeology	3
	GLG	445	Planetary Science	3
	GLG	470	Solid Earth Geophysics and Geodynamics	3
	GLG	471	Applied Geophysics	4

Effective Fall 2025.

### **COLLEGE OF NURSING**

1. Change the requirements for the **Bachelor of Science in Nursing** degree in **Nursing** in the College of Nursing.

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

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

PHM	350	Introductory Human Pharmacology	3
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- (2) Replace item 2. b. with the following:

NUR	101	Nursing Study Skills Seminar	1
NUR	204	Introduction to Professional Nursing	3
NUR	206	Health Assessment	2
NUR	208	Clinical Nursing Skills	2
NUR	210	Foundations of Nursing Practice	5
NUR	306	Pathophysiology, Pharmacology, and Genomics I	4
NUR	308	Pathophysiology, Pharmacology, and Genomics II	3
NUR	310	Nursing Care of Adults I	5
NUR	312	Nursing Care of Adults II	5
NUR	314	Scholarship of Nursing Practice	3
NUR	404	Kaplan NCLEX Review Seminar	1
NUR	416	Informatics, Analytics, and Innovation	2
NUR	418	Transformational Leadership	3
NUR	420	Transitions to Nursing	3
NUR	426	Capstone and Preceptorship	4
NUR	430	Population and Global Health	4
NUR	440	Nursing Care of Children and their Families	4
NUR	444	Nursing Care of the Childbearing Family and Beyond	4

Effective Fall 2025.

2. Establish a pass-through for students pursuing the **Doctor of Nursing Practice** degree in **Nursing Practice**. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its February 17, 2025 meeting.

*The concentrations in the Doctor of Nursing Practice degree in Nursing Practice are noted on the student's academic record when the requirements for the degree have been completed.*

- a. In the entry-level text add the following paragraph:

Adult-Gerontology Clinical Nurse Specialist (CNS) and Nurse Practitioner (Adult Gerontological Primary Care, Nurse Practitioner-Family, Nurse Practitioner-Psychiatric Mental Health) students enrolled in the BSN – DNP program may be granted the MSN after they have completed all the master-level requirements for their concentration and then continue with their DNP course trajectory to complete the DNP. The DNP requirements remain the same. Students who elect to pass through from the MSN to the DNP complete all the DNP requirements.

Effective Summer 2025.

## **PART II - NEW COURSES**

### **DEPARTMENT OF ACCOUNTING AND INFORMATION SYSTEMS**

- ITM 210      Business Analytics  
Fall of every year. Spring of every year. Summer of every year. 2(2-0) R: Open to undergraduate students in the Accounting major or in the Business - Admitted major or in the Finance Major or in the Human Resource Management Major or in the Information Technology Minor or in the Management Major or in the Marketing Major or in the Supply Chain Management Major and not open to undergraduate students in the Hospitality Business Major.  
Use of data and analytics to identify and create business value.  
Effective Fall Semester 2025

### **DEPARTMENT OF ANIMAL SCIENCE**

- ANS 145      Horse Handling  
Spring of every year. 3(0-6) R: Open to undergraduate students in the Department of Animal Science or in the Lyman Briggs Animal Science Coordinate Major. Approval of department.  
Basics of horse handling, riding, and showing.  
SA: ANS 063A  
Effective Spring Semester 2025
- ANS 246      Young Horse Handling  
Fall of every year. 2(0-4) P: ANS 145  
Develop skill sets to safely work with weanling and yearling horses.  
SA: ANS 140A  
Effective Fall Semester 2025
- ANS 249      Methods of Instructing Safe Horsemanship  
Spring of every year. 2(1-2) P: ANS 140 and ANS 242  
Aspects of a successful riding instruction program. Mentoring students in hands-on riding.  
Effective Fall Semester 2025
- ANS 340      Equine Business and Entrepreneurship  
Spring of every year. 3(3-0) P: ANS 242 and AFRE 330  
Development and unique aspects of entrepreneurial equine enterprises.  
Effective Fall Semester 2025
- ANS 341      Introduction to Equine Assisted Services  
Spring of every year. 3(2-2) P: ANS 242  
Principles of equine assisted services. Social, emotional, cognitive, physical, and self-esteem benefits to humans in therapeutic and non-therapeutic settings. Field trip required.  
Effective Fall Semester 2025
- ANS 346      Starting Horses Under Saddle I  
Spring of every year. 2(0-4) P: ANS 246  
Specific training techniques to start horses under saddle.  
SA: ANS 146  
Effective Fall Semester 2025
- ANS 347      Equine Health  
Spring of every year. 3(2-2) P: ANS 242 and ANS 309  
Recognition and evaluation of equine health issues.  
Effective Fall Semester 2025
- ANS 443      Equine Nutrition  
Fall of every year. 3(2-2) P: ANS 242 and ANS 313  
Equine nutrition requirements and feeding management.  
Effective Fall Semester 2025

- ANS 446      Starting Horses Under Saddle II  
Fall of every year. 2(0-4) P: ANS 346  
Techniques to start untrained horses under saddle.  
SA: ANS 146  
Effective Fall Semester 2025
- ANS 448      Equine Science Seminar  
Spring of every year. 2(2-0) P: (ANS 442 or concurrently) or (ANS 445 or concurrently)  
Explore advanced topics in equine science, focusing on recent research, industry trends, and critical issues.  
Effective Fall Semester 2025

### **DEPARTMENT OF HISTORY**

- HST 348      Modern Germany  
Fall of every year. Spring of every year. 3(3-0)  
Enlightenment, industrial and political revolutions, and national unification. Jewish emancipation and antisemitism, Catholicism and Protestantism. Nationalism and militarism. World War I, Weimar, Nazism, Holocaust. Postwar developments, reunification and aftermath.  
Effective Spring Semester 2026

### **DEPARTMENT OF KINESIOLOGY**

- KIN 815B      Essentials of Strength and Conditioning II  
Spring of every year. 3(3-0) P: KIN 815 R: Open to students in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
Improving short and long-term goals through proper exercise protocols for competitive and non-competitive sports and activities.  
Effective Fall Semester 2025
- KIN 819      Advanced Sport Nutrition  
Spring of every year. 3(3-0) R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
Science of nutrition and the roles it plays in health, athletic performance, recovery, and weight management.  
Effective Fall Semester 2025
- KIN 849B      Organizational Behavior in Sport  
Fall of every year. 3(3-0) R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
Organizational socialization, stress, and wellbeing; organizational decision-making and teamwork; communication; organizational change.  
Effective Fall Semester 2025
- KIN 851F      The Sport Enterprise: Sport Finance  
Spring of every year. 3(3-0) R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
Economic and financial principles and theories applied to sport context; conducting financial analyses to guide decision-making and managerial recommendations; analysis of current sport-related economic and financial issues.  
Effective Fall Semester 2025



- KIN 851M      The Sport Enterprise: Sport Marketing  
Summer of every year. 3(3-0) R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
Foundations of theoretical and practical knowledge in marketing principles, techniques, and issues confronting professionals in sport organizations. Theories of marketing.  
Effective Fall Semester 2025
- KIN 855P      Psychosocial Aspects of Athletic Performance  
Spring of every year. 3(3-0) R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
Psychosocial issues for competitive athletes, including athletic identity, social identity development, unique stressors of the sport context, and transition out of sport; mental health of athletes; planning, implementing, and evaluating mental skills training; theory and best practices in applied sport psychology.  
Effective Fall Semester 2025
- KIN 874      Skepticism and Inquiry in the Sport Sciences  
Fall of every year. 3(3-0) R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
Processes whereby the claims and evidence of products and services within the sports, health, and wellness industries are independently judged; Methods of inquiry to test hypotheses and evaluate outcomes of practices.  
Effective Fall Semester 2025
- KIN 875A      Foundations of Sport Analytics  
Spring of every year. 3(3-0) P: KIN 874 R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
Data analytics in sport settings, including tools and techniques to analyze real-world data and make informed decisions; critical thinking and data analysis skills through descriptive, diagnostic, predictive, and prescriptive analyses; Statistical techniques and visualization principles; Ethics.  
Effective Fall Semester 2025
- KIN 875B      Applied Sport Analytics  
Fall of every year. Summer of every year. 3(3-0) P: KIN 875A R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
Continuation of KIN 875B. Development of student project in collaboration with instructor.  
Effective Fall Semester 2025

### **COLLEGE OF NURSING**

- NUR 101      Nursing Study Skills Seminar  
Fall of every year. Spring of every year. Summer of every year. 1(1-0) R: Open to students in the College of Nursing or in the Nursing Major. Approval of college.  
Provides students with the foundational tools to excel in both theoretical and practical aspects of the nursing curriculum.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Spring Semester 2025
- NUR 204      Introduction to Professional Nursing  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: PSL 250 and (HDFS 225 or concurrently) and PSY 238 R: Open to students in the College of Nursing or in the Nursing Major. Approval of college.  
Examine the fundamental principles and values that underpin the nursing profession while fostering a sense of community and professional identity.  
Effective Summer Semester 2025

- NUR 206      Health Assessment  
Fall of every year. Spring of every year. Summer of every year. 2(1-1) R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 204 concurrently and NUR 210 concurrently  
Introduction to the components of a comprehensive health assessment including distinguishing abnormal from normal assessment findings.  
Effective Summer Semester 2025
- NUR 208      Clinical Nursing Skills  
Fall of every year. Spring of every year. Summer of every year. 2(1-1) P: PSL 250 and (HDFS 225 or concurrently) and PSY 238 R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 204 concurrently and NUR 206 concurrently  
Provide foundational knowledge to develop competence in essential clinical skills and application to evidence-based nursing practice.  
Effective Summer Semester 2025
- NUR 210      Foundations of Nursing Practice  
Fall of every year. Spring of every year. Summer of every year. 5(3-2) P: PSL 250 and (HDFS 225 or concurrently) and PSY 238 R: Open to students in the College of Nursing or in the Nursing Major. Approval of college.  
Focus on foundational nursing concepts and application of the nursing process to evidence-based care to diverse populations.  
Effective Spring Semester 2025
- NUR 306      Pathophysiology, Pharmacology & Genomics I  
Fall of every year. Spring of every year. Summer of every year. 4(4-0) P: ANTR 350 or (PSL 310 or concurrently) or (PSL 250 or concurrently) or (PSL 431 or concurrently) or (PSL 432 or concurrently) or (CEM 141 or concurrently) or CEM 161 R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 210 concurrently  
Explore the relationship between the physiologic changes, clinical manifestations of altered health, genomics, and the pharmacotherapy utilized in the treatment of complex disease processes.  
Effective Summer Semester 2025
- NUR 308      Pathophysiology, Pharmacology & Genomics II  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: NUR 306 R: Open to students in the College of Nursing or in the Nursing Major. Approval of college.  
Explores the relationship between physiologic changes, clinical manifestations of altered health, genomics, and the pharmacotherapy used in the treatment of complex disease processes.  
Effective Summer Semester 2025
- NUR 310      Nursing Care of Adults 1  
Fall of every year. Spring of every year. Summer of every year. 5(3-2) R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 206 concurrently and NUR 208 concurrently and NUR 210 concurrently and NUR 306 concurrently  
Focuses on using the nursing process including critical thinking, clinical reasoning, and clinical decision-making to manage care for acute and chronically ill patients.  
Effective Summer Semester 2025
- NUR 312      Nursing Care of Adults II  
Fall of every year. Spring of every year. Summer of every year. 5(3-2) P: NUR 310 R: Open to students in the College of Nursing or in the Nursing Major. Approval of college.  
Application of the nursing process including critical thinking, clinical reasoning, and clinical decision-making to manage care for acute and chronically ill patients.  
Effective Summer Semester 2025

- NUR 314      Scholarship of Nursing Practice  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 204 concurrently and NUR 210 concurrently  
Introduction to evidence-based practice and research methodology to inform ethical nursing practice.  
Effective Summer Semester 2025
- NUR 404      Kaplan NCLEX Review Seminar  
Fall of every year. Spring of every year. Summer of every year. 1(1-0) R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 418 concurrently and NUR 420 concurrently and NUR 426 concurrently  
Reinforce core nursing concepts to strengthen critical thinking and clinical judgment to promote NCLEX examination success.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Summer Semester 2025
- NUR 416      Informatics, Analytics, and Innovation  
Fall of every year. Spring of every year. Summer of every year. 2(2-0) R: Open to students in the College of Nursing or in the Nursing Major. Approval of college.  
Knowledge and skills necessary to effectively utilize information technology to drive innovation in healthcare.  
Effective Spring Semester 2025
- NUR 418      Transformational Leadership  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: PSL 250 and HDFS 225 and (PSY 238 or concurrently) and MMG 201 R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 416 concurrently  
Integration of evidence-based practice competencies in professional nursing as it relates to leadership, management, and nursing care delivery systems.  
Effective Summer Semester 2025
- NUR 420      Transitions to Nursing  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 404 concurrently and NUR 426 concurrently  
Develop personal and professional strategies to successfully transition into professional practice and advocate for the advancement of health professions for the global community.  
Effective Summer Semester 2025
- NUR 426      Capstone and Preceptorship  
Fall of every year. Spring of every year. Summer of every year. 4(1-3) P: NUR 206 and NUR 208 R: Open to students in the College of Nursing or in the Nursing Major. Approval of college.  
Application of evidence-based practice competencies in professional nursing as it relates to quality improvement and nursing care delivery systems.  
Effective Summer Semester 2025
- NUR 430      Population and Global Health  
Fall of every year. Spring of every year. Summer of every year. 4(3-1) P: NUR 206 and NUR 208 and NUR 420 R: Open to students in the College of Nursing or in the Nursing Major. Approval of college.  
Health care processes and systems to achieve better health outcomes for global populations and communities.  
Effective Summer Semester 2025
- NUR 440      Nursing Care of Children and Their Families  
Fall of every year. Spring of every year. Summer of every year. 4(2-2) R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 206 concurrently and NUR 208 concurrently  
Theoretical concepts and clinical application of nursing care for children, adolescents, and their families using a holistic perspective in varied settings.  
Effective Summer Semester 2025

- NUR 444      Nursing Care of the Childbearing Family and Beyond  
Fall of every year. Spring of every year. Summer of every year. 4(2-2) R: Open to students in the College of Nursing or in the Nursing Major. Approval of college. C: NUR 206 concurrently and NUR 208 concurrently  
Theoretical concepts and clinical application of nursing care for the normal and at risk childbearing families and women's health.  
Effective Summer Semester 2025

**DEPARTMENT OF TEACHER EDUCATION**

- TE 832A      World Language Teaching Methods I  
Fall of every year. 3(3-0) R: Approval of department.  
Second language theories in a US K-12 setting. Teaching the main areas of a foreign language in the target language. Lesson plan design and implementation including culture and differentiation.  
Effective Fall Semester 2025
- TE 832B      World Language Teaching Methods II  
Summer of every year. 1(1-0)  
Second language theories in a US K-12 setting. Teaching the main areas of a foreign language in the target language. Lesson plan design and implementation including culture and differentiation, Summer Camp and Tutoring practice.  
Effective Summer Semester 2026
- TE 833      Classroom Management in American Schools  
Fall of every year. 3(3-0)  
Classroom management for teaching of a world language in PK-12 setting. Lesson planning and materials development. Organizing a classroom for learning. Motivating and engaging students.  
Effective Fall Semester 2025
- TE 884A      Internship and Field Experiences in World Language Teaching I  
Fall of every year. 2(2-0)  
Supervised graduate classroom internship and field experience in world language teaching  
Request the use of the Pass-No Grade (P-N) system.  
Effective Fall Semester 2025
- TE 884B      Internship and Field Experiences in World Language Teaching II  
Spring of every year. 2(2-0)  
Supervised graduate classroom internship and field experience in world language teaching  
Request the use of the Pass-No Grade (P-N) system.  
Effective Spring Semester 2026
- TE 884C      Internship and Field Experiences in World Language Teaching III  
Fall of every year. 1 to 2 credits.  
Supervised graduate classroom internship and field experience in world language teaching  
Request the use of the Pass-No Grade (P-N) system.  
Effective Fall Semester 2025
- TE 884D      Internship and Field Experiences in World Language Teaching IV  
Spring of every year. 1(1-0)  
Supervised graduate classroom internship and field experience in world language teaching  
Request the use of the Pass-No Grade (P-N) system.  
Effective Spring Semester 2026

**OFFICE OF THE PROVOST**

UGS 492      Undergraduate Studies Capstone  
Fall of every year. Spring of every year. Summer of every year. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department. A student may earn a maximum of 8 credits  
Integrates learning from certificate course work and experience learning to demonstrate mastery of the learning outcomes for the certificate program.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.  
Effective Fall Semester 2025

## **PART III – COURSE CHANGES**

### **DEPARTMENT OF ANIMAL SCIENCE**

- ANS 101 Professional Development in Animal Science I  
Fall of every year. Spring of every year. 1(0-2) ~~R: Open to students in the Animal Science major. R: Open to students in the Lyman Briggs College or in the Department of Animal Science.~~  
Careers in animal science. Job application, portfolio development, interviewing, and resume development.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Fall Semester 2025
- ANS 140 Fundamentals of Horsemanship  
Fall of every year. Spring of every year. 2(0-4) A student may earn a maximum of 4 credits in all enrollments for this course. ~~R: Approval of department. R: Open to students in the Department of Animal Science or in the Lyman Briggs Animal Science Coordinate Major. Approval of department.~~  
~~Safe horse handling skills. Riding skills. Riding aids and working with the horse at the beginner, intermediate or advanced level. Riding skills. Riding aids and developing riders' skills at the beginner, intermediate or advanced levels.~~  
Effective Fall Semester 2025
- ANS 140A Fundamentals of Young-Horse Training  
Fall of every year. 2(0-4) RB: ANS 140 R: Open to students in the College of Agriculture and Natural Resources or in the Institute of Agricultural Technology or in the Department of Animal Science or in the Applied Horse Science Major or in the Horse Management Major.  
Demonstration and practice of safely working with and training weanlings, yearlings and two-year-old horses. Halter training and longeing techniques of clippers and bathing. Discussion of application of learning theory. Assist with young horse husbandry procedures.  
~~DELETE COURSE~~  
Effective Summer Semester 2025
- ANS 141L Draft Horse Basics  
Fall of every year. 2(0-4)  
~~Safe handling, hitching and driving of draft horses. Care and maintenance of harness and horse drawn equipment. Safe handling, hitching and driving of draft horses.~~  
SA: ANS 141  
Effective Fall Semester 2025
- ANS 146 Fundamentals of Horse Training  
Fall of every year. Spring of every year. 3(0-6) A student may earn a maximum of 6 credits in all enrollments for this course. P: ANS 140 or approval of department R: Open to undergraduate students in the Institute of Agricultural Technology. Approval of department.  
Training and preparing an untrained horse for handling, riding and showing. Sale preparation.  
SA: ANS 063a  
~~DELETE COURSE~~  
Effective Summer Semester 2025
- ANS 200D ~~Introductory Judging of Horses~~ Introduction to Horse Judging  
~~Spring of every year. 1 to 2 credits. 2(0-4) A student may earn a maximum of 3 credits in all enrollments for this course. A student may earn a maximum of 4 credits in all enrollments for this course.~~  
~~Evaluation of functional conformation and performance of horses. Preparation for intercollegiate competition. The components of objectively evaluating horses for both competition and purchase. Conformation as it affects function.~~  
~~SA: ANS 200B~~  
Effective Fall Semester 2025

- ANS 225 ~~Horse Behavior and Welfare~~ Horse Behavior, Welfare & Ethics  
Summer of every year. 2(2-0) ~~R: Open to undergraduate students or agricultural technology students. R: Approval of department.~~  
Natural behavior, senses, training psychology, and common behavioral problems of horses. Equine welfare issues. Horse's natural behavior, safe horse handling, common behavioral problems, and equine welfare issues.  
Effective Fall Semester 2025
- ANS 242 Introductory Horse Management  
Fall of every year. 3(2-2) ~~Not open to students with credit in ANS 442.~~  
~~Principles of horse management. Reproduction, nutrition, herd health, genetics, economics, marketing.~~ Principles of horse management: Reproduction, nutrition, herd health, genetics, and economics.  
Effective Fall Semester 2025
- ANS 247 Horse Health  
Spring of every year. 2(2-0) R: Open to agricultural technology students.  
Health risks for horses, emergency care, preventive health care.  
DELETE COURSE  
Effective Fall Semester 2024
- ANS 300D Advanced Horse Judging  
Fall of every year. ~~2 credits. 2(0-4)~~ P: ANS 200D ~~R: Not open to freshmen. A student may earn a maximum of 8 credits from the following courses: ANS 200A, ANS 200C, ANS 200D, ANS 200E, ANS 200F, ANS 300A, ANS 300C, ANS 300D, ANS 300E, and ANS 300F.~~ R: Not open to freshmen. A student may earn a maximum of 8 credits from the following courses: ANS 200A, ANS 200B, ANS 200C, ANS 200D, ANS 200E, ANS 200F, ANS 300A, ANS 300B, ANS 300C, ANS 300D, ANS 300E, and ANS 300F.  
~~Evaluation of functional characteristics of horses. Represent MSU in intercollegiate competition. Field trips required.~~ Evaluation of functional characteristics of horses. Represent MSU in intercollegiate competition. Field trips required.  
Effective Fall Semester 2025
- ANS 410 Stem Cells in Reproduction and Development  
~~Fall of odd years. Fall of every year. 3(3-0)~~ P: (BS 161 and BS 171L) and (ANS 307 or approval of department) P: (BS 161 and BS 171) or LB 145 and (ANS 314 or IBIO 341 or approval of department) RB: (BMB 200 or BMB 401) and ANS 425 RB: (BMB 200 or BMB 401) and (ANS 307 or ANS 425) Not open to students with credit in ANS 810.  
Properties and classification of stem cells; methodology to isolate, culture, and differentiate stem cells; mechanisms underlying stemness and differentiation of stem cells; application of stem cells in agricultural studies, veterinary medicine, and biomedical research.  
Effective Fall Semester 2025
- ANS 427 ~~Environmental Toxicology and Society~~ Environmental Toxicology and Society (W)  
~~Spring of odd years.~~ Spring of every year. 3(3-0) Interdepartmental with Sociology P: Completion of Tier I Writing Requirement RB: ISB 200 or ISB 202 or ISB 204 or BMB 200 or BS 161 or BS 181H or LB 145 or BS 162 or BS 182H or LB 144  
Impact of environmental chemicals on health and modern society. Cellular and organ functions and their interface with the environment. Limitations of scientific investigation and environmental regulations.  
Effective Spring Semester 2025
- ANS 442 Advanced Horse Management  
Spring of every year. 3(2-2) ~~P: ANS 242~~ P: ANS 242 and ANS 313 RB: ANS 313 R: Not open to freshmen or sophomores.  
~~Management of stables and breeding farms. Pedigree and conformational selection, reproduction. Promotion, marketing, economics. Nutrition and feeding, facilities, and herd health.~~ Scientific application of biological and biotechnological principles in the disciplines of horse production and management.  
SA: ANS 498  
Effective Fall Semester 2025

- ANS 445 Equine Exercise Physiology  
Fall of every year. 4(3-2) P: ~~ANS 315 or concurrently RB: ANS 313 and ANS 315~~ RB: ANS 313 R:  
Open to juniors or seniors.  
Research in equine exercise science. Physical, physiologic, metabolic and mental adaptation to athletic training. Nutrition and bioenergetics of muscle metabolism. Review and evaluation of current research in equine exercise science.  
Effective Fall Semester 2025

### **DEPARTMENT OF COMMUNITY SUSTAINABILITY**

- CSUS 814 Sustainable Tourism and Protected Area Management: Theories and Applications  
Fall of odd years. 3(3-0)  
Historical antecedents and current concepts of leisure, travel, and tourism. Tourism theory and applications.  
SA: ACR 814, PRR 874  
DELETE COURSE  
Effective Spring Semester 2025

### **DEPARTMENT OF FORESTRY**

- FOR 340 Forest Ecology  
Fall of every year. 3(3-0) ~~P: ((CSS 210 or GEO 206) and completion of Tier I writing requirement) and (PLB 105 or BS 162 or LB 144 or FOR 175) P: ((CSS 210 or GEO 206 or GLG 200 or GLG 201) and completion of Tier I writing requirement) and (PLB 105 or BS 162 or LB 144 or FOR 175) RB: IBIO 355~~  
Ecological interactions crucial to the sustainable management of forest ecosystems. Plant resources, species interactions, succession, biodiversity, productivity, nutrient and carbon cycling, ecosystem structure and function, exotic species, global environmental change.  
SA: FOR 404  
Effective Fall Semester 2025
- FOR 414 Renewable Wood Products  
~~Fall of every year.~~ Spring of every year. 3(2-2) P: (CEM 141) and completion of Tier I writing requirement R: Not open to freshmen or sophomores.  
Renewable wood products with focus on wood and wood based products. Tree growth and production of woody tissues, wood structure and identification, wood processing and utilization as timber, fiber and pulp product, composites and biofuel for energy. Physical and mechanical properties of wood and relations with practical applications.  
Effective Spring Semester 2026
- FOR 419 Applications of Geographic Information Systems to Natural Resources Management  
Spring of every year. 4(2-4) Interdepartmental with Fisheries and Wildlife, Geography ~~P: FOR 128 or FW 293 P: FOR 128 or FW 293 or AFRE 203 RB: GEO 221~~  
Application of geographic information systems, remote sensing, and global positioning systems to integrated planning and management for fish, wildlife, and related resources.  
Effective Spring Semester 2026

### **DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY STUDIES**

- HDFS 817 Advanced Practice in Infant and Toddler Early Childhood Programming  
Fall of every year. 3(3-0) RB: HDFS 811 R: Open to graduate students.  
Indicators of developmentally appropriate practices in infant and toddler programming including individualized and culturally sensitive practices with infants, toddlers, and families, research-informed practice, early learning environments, methods and materials, partnerships with families, reflective supervision, infant/toddler and program assessment, and professional development of staff. Observation and interactive experiences required.  
DELETE COURSE  
Effective Spring Semester 2025



- HDFS 818      Advanced Curricular Adaptations in Diverse Early Childhood Environments  
Spring of every year. 3(3-0) RB: HDFS 811 R: Open to graduate students.  
Child development principles and accreditation standards for designing curricula for diverse early childhood programs. Strong emphasis on planning and evaluating learning activities and programs.  
DELETE COURSE  
Effective Spring Semester 2025
- HDFS 903      ~~Evidence-based Couple and Family Therapy Intervention Programs~~  
Advanced Evidence-Based Family Therapy  
Spring of even years. 3(3-0) RB: HDFS 830  
In-depth review of couple and family therapy intervention programs with strong evidence of effectiveness.  
Effective Fall Semester 2024

### **DEPARTMENT OF INTEGRATIVE BIOLOGY**

- IBIO 357      Global Change Biology (W)  
~~Spring of every year.~~ Fall of every year. 3(3-0) P: (IBIO 355) and completion of Tier I writing requirement RB: Intended for science or engineering majors R: Not open to freshmen.  
Causes and consequences of modes of contemporary global change that are caused by biological systems or impact biological systems. Theories, evidence, and predictions in global warming, ocean acidification, desertification, eutrophication, food security, and mass extinction.  
SA: ZOL 357  
Effective Fall Semester 2025
- IBIO 368      Zoo Animal Biology and Conservation  
~~Summer of every year. Fall of every year.~~ 3(3-0) ~~Interdepartmental with Animal Science, Fisheries and Wildlife, Landscape Architecture~~ P: BS 162 or LB 144 or BS 182H or approval of department RB: Previous work in biology  
Captive animal biology including illustrated examples of care, behavioral welfare and conservation work.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.  
Effective Fall Semester 2025

### **DEPARTMENT OF KINESIOLOGY**

- KIN 815      Essentials of Strength and Conditioning  
~~Spring of every year.~~ Fall of every year. 3(3-0) ~~RB: Human anatomy and physiology; undergraduate courses in biomechanics and exercise physiology. R: Open to master's students in the Department of Kinesiology. R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate.~~  
Methods and techniques associated with design of strength and conditioning programs to enhance performance in sport and fitness. Applications of anatomical, physiological, neuromuscular, and biomechanical studies the design of strength and conditioning programs to enhance human performance in sport and fitness.  
Effective Fall Semester 2025
- KIN 849      Theory and Practice of Modern Sport Leadership  
~~Spring of every year. 3(3-0) R: Open to graduate students in the Education Major or in the Sport Leadership and Administration Graduate Certificate or approval of department. R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.~~  
Theories of management and organizational behavior in a sport context. Practical strategies and methods for management, development, and advancement of sport professionals, athletes, and stakeholders.  
Effective Fall Semester 2025

- KIN 852 ~~Ethics in Sport Coaching, Leadership, and Administration~~ Ethics for the Sport Practitioner  
Spring of every year. Summer of every year. 1(1-0) ~~R: Open to graduate students in the Education Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.~~ R: Approval of department.  
~~Ethical decision-making processes. Moral obligations of sport coaches, leaders, and administrators.~~ Ethical decision-making processes. Moral obligations of sport practitioners, including coaches, performance training specialists, leaders, and administrators.  
Effective Fall Semester 2025
- KIN 855 Psychosocial Bases of Coaching Athletes  
Fall of every year. 3(3-0) ~~R: Open to graduate students in the Education Major or in the Sport Coaching and Leadership Graduate Certificate or in the Sport Coaching and Leadership Major or approval of department.~~ R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
~~Athlete motivation, motivational climates, and the social psychology of coaching and leadership. Communication skills and leadership behaviors. Athlete mental health. Mental skills that enhance an athlete's performance. Foundations of psychology relevant to the sport context; Athlete motivation and motivational climates; Leadership behaviors; Effective interpersonal communication skills; Cognitive-behavioral approaches to reinforcement; Group dynamics; Coach mental health and burnout.~~  
Effective Fall Semester 2025
- KIN 858 ~~Student Athlete Development~~ Collegiate Athlete Development  
Summer of every year. 3(3-0) ~~R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.~~  
~~Historical and contemporary issues faced by student athletes, competencies required for student athlete eligibility, student athlete retention data metrics, and reflective thought and programming for student athletes.~~ Historical and contemporary context and policy for the college athlete; advising college athletes holistically on aspects of personal, academic, and career development, as well as issues in the evolving college sports landscape.  
Effective Fall Semester 2025
- KIN 872 ~~The Science of Sport Coaching, Leadership, and Administration~~ Orientation to the Sport Professions  
Fall of every year. Spring of every year. Summer of every year. ~~Fall of every year.~~ 3(3-0) ~~R: Open to master's students in the Sport Coaching and Leadership Major or approval of department.~~ R: Open to students in the Education Major or in the Sport Coaching Graduate Certificate or in the Sport Coaching, Leadership and Administration Major or in the Sport Leadership and Administration Graduate Certificate or approval of department.  
~~Science of sport coaching, leadership, and administration. Professional and reflective learning strategies. Coaching and leadership philosophy. Scientific literacy, evidence-based practices, research translation, and applied inquiry. Research ethics training. Professional competencies and leadership capacity; explore history, context, and roles of the sport professions; professional advancement; scientific literacy and critical thinking; ethics and safety training.~~  
Effective Fall Semester 2025
- KIN 880 ~~Sport and Leadership Practicum~~ Practicum in Sport Coaching  
Fall of every year. Spring of every year. Summer of every year. ~~Fall of every year.~~ Spring of every year. 3(1-4) 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. ~~P: KIN 872 or approval of department~~ R: Open to master's students in the Sport Coaching and Leadership Major or approval of department. R: Open to students in the Sport Coaching, Leadership and Administration Major. Approval of department. A student may earn a maximum of 6 credits  
~~Supervised practical experiences in specific sport or leadership programs.~~ Supervised practical experiences in specific sport or leadership programs. Video review and peer review of field experiences. Structured reflection on implementation and effectiveness. Planning and evaluation. Action plans.  
Effective Fall Semester 2025

- KIN 896 ~~Integrative Capstone in Sport Coaching, Leadership and Administration~~  
~~Capstone in the Applied Sport Sciences~~  
Fall of every year. Spring of every year. Summer of every year. 2(2-0) ~~P: KIN 872 and KIN 880 or approval of department R: Open to master's students in the Sport Coaching and Leadership Major. R: Open to students in the Sport Coaching, Leadership and Administration Major. Approval of department.~~  
Integrative capstone in coaching science, best practices, leadership, and management in sport. Integrative capstone in the applied sport sciences, with specific focus on sport coaching, sport management, or strength and conditioning.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Fall Semester 2025

### **DEPARTMENT OF MILITARY SCIENCE**

- MS 110L Army Leadership and Officer Development Laboratory  
Fall of every year. ~~4(0-2)~~ 1 to 2 credits. RB: MS 110 or concurrently  
~~Introduction to leader tasks in a field environment, regular practical exercises and fitness evaluations per Army, Army Reserve, and National Guard standards. Hands-on training and applied learning experiences to supplement the corresponding Military Science (MS) course. Students engage in practical exercises that reinforce skills in leadership, military tactics, and decision-making under realistic scenarios.~~  
Effective Fall Semester 2025
- MS 120L Introduction to Army Leadership and Problem-Solving Laboratory  
Spring of every year. ~~4(0-2)~~ 1 to 2 credits. RB: MS 110 and MS 110L and MS 120  
~~Introduction to team operations and tactics in a field environment, regular practical exercises and fitness evaluations per Army, Army Reserve, and National Guard standards. Hands-on training and applied learning experiences to supplement the corresponding Military Science (MS) course. Students engage in practical exercises that reinforce skills in leadership, military tactics, and decision-making under realistic scenarios.~~  
Effective Fall Semester 2025
- MS 210L Values and Ethics of Army Leaders Laboratory  
Fall of every year. ~~4(0-2)~~ 1 to 2 credits. RB: MS 110 and MS 110L and MS 120 and MS 120L and (MS 210 or concurrently)  
~~Introduction to squad level operations and tactics in a field environment, regular practical exercises and fitness evaluations per Army, Army Reserve, and National Guard standards. Hands-on training and applied learning experiences to supplement the corresponding Military Science (MS) course. Students engage in practical exercises that reinforce skills in leadership, military tactics, and decision-making under realistic scenarios.~~  
Effective Fall Semester 2025
- MS 220L Army Doctrine and Team Development Laboratory  
Spring of every year. ~~4(0-2)~~ 1 to 2 credits. RB: MS 110 and MS 110L and MS 120 and MS 120L and MS 210 and MS 210L and (MS 220 or concurrently)  
~~Application of advanced squad level operations and tactics in a field environment, regular practical exercises and fitness evaluations per Army, Army Reserve, and National Guard standards. Hands-on training and applied learning experiences to supplement the corresponding Military Science (MS) course. Students engage in practical exercises that reinforce skills in leadership, military tactics, and decision-making under realistic scenarios.~~  
Effective Fall Semester 2025
- MS 310L Leading and Problem Solving in Army Units Laboratory  
Fall of every year. ~~4(0-2)~~ 1 to 2 credits. RB: MS 110 and MS 110L and MS 120 and MS 120L and MS 210 and MS 210L and MS 220 and MS 220L and (MS 310 or concurrently)  
~~Introduction to platoon level operations and tactics in a field environment, regular practical exercises and fitness evaluations per Army, Army Reserve, and National Guard standards. Hands-on training and applied learning experiences to supplement the corresponding Military Science (MS) course. Students engage in practical exercises that reinforce skills in leadership, military tactics, and decision-making under realistic scenarios.~~  
Effective Fall Semester 2025

- MS 320L      Army Small Unit Tactics and Leadership Laboratory  
Spring of every year. ~~4(0-2)~~ 1 to 2 credits. RB: (MS 320 or concurrently) and MS 120 and MS 120L and MS 210 and MS 210L and MS 220 and MS 220L and MS 310 and MS 310L  
~~Application of advanced platoon-level operations and tactics in a field environment, regular practical exercises and fitness evaluations per Army, Army Reserve, and National Guard standards. Hands-on training and applied learning experiences to supplement the corresponding Military Science (MS) course. Students engage in practical exercises that reinforce skills in leadership, military tactics, and decision-making under realistic scenarios.~~  
Effective Fall Semester 2025
- MS 410L      Adaptive Army Leadership Laboratory  
Fall of every year. ~~4(0-2)~~ 1 to 2 credits. RB: (MS 410 or concurrently) and MS 320 and MS 320L and MS 120L and MS 210 and MS 210L and MS 220 and MS 220L and MS 310 and MS 310L  
~~Application of Army planning and training processes to introduce MS 110, 210 and 310 students to platoon and below operations in field settings, regular practical exercises and fitness evaluations per Army, Army Reserve, and National Guard standards. Hands-on training and applied learning experiences to supplement the corresponding Military Science (MS) course. Students engage in practical exercises that reinforce skills in leadership, military tactics, and decision-making under realistic scenarios.~~  
Effective Fall Semester 2025
- MS 420L      Army Leadership in a Complex World Laboratory  
Spring of every year. ~~4(0-2)~~ 1 to 2 credits. RB: (MS 420 or concurrently) and MS 410L and MS 410 and MS 320L and MS 320 and MS 310L and MS 310 and MS 220L and MS 220 and MS 210L  
~~Application of Army planning and training processes to teach advanced tactics to MS 110, 210 and 310 students for platoon and below operations in field settings, regular practical exercises and fitness evaluations per Army, Army Reserve, and National Guard standards. Hands-on training and applied learning experiences to supplement the corresponding Military Science (MS) course. Students engage in practical exercises that reinforce skills in leadership, military tactics, and decision-making under realistic scenarios.~~  
Effective Fall Semester 2025

### **COLLEGE OF NURSING**

- NUR 371      Behavioral Health Nursing  
~~Fall of every year. Spring of every year. Fall of every year. Spring of every year. Summer of every year. 4(2-6) P: NUR 323 and NUR 333 P: PSL 250 and PSY 238 and HDFS 225 and MMG 201 and NUR 206 and NUR 208 R: Open to students in the College of Nursing or in the Nursing Major.~~  
Approval of college.  
~~Extension of foundational social science concepts into nursing therapeutics aimed at behavioral health and the care of persons with mental illnesses.~~  
Effective Summer Semester 2025
- NUR 902      Scientific Foundations for the Advanced Practice Nurse  
Fall of every year. 3(3-0) R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major.  
~~Analysis and translation of knowledge gained from the natural and social sciences to inform practice and provide a foundation for the Advanced Practice Nurse role. Analysis and translation of evidence and knowledge gained from the nursing, natural, and social sciences.~~  
Effective Spring Semester 2025
- NUR 903      Healthcare Informatics  
Spring of every year. 3(3-0) R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major.  
~~Health information systems and technologies in relationship to the delivery of efficient, high quality healthcare. Utilization of communication technologies and informatics processes to guide the integration and to influence practice, policy, and healthcare delivery.~~  
Effective Spring Semester 2025

- NUR 904      Health Policy and Advocacy  
Fall of every year. Summer of every year. 3(3-0) R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major.  
Interactions between economics, ethical principles, social policies, legislative and regulatory processes that influence access, delivery and organization of healthcare.  
Effective Spring Semester 2025
- NUR 905      Patient Safety, Quality Improvement and Quality Management in Healthcare  
Fall of every year. Spring of every year. 3(3-0) P: NUR 902 R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major.  
~~Application and evaluation of quality improvement initiatives through the use of theories, models and outcome measurements.~~ Application and evaluation of healthcare culture, theories, models and outcome measures on their impact to quality and safety initiatives.  
Effective Fall Semester 2021
- NUR 906      Leadership in Complex Health Systems  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major.  
Knowledge, skills and attributes required to assume leadership as an Advanced Practice Registered Nurse in complex health systems.  
Effective Spring Semester 2025
- NUR 907      Advanced Pathophysiology for the Advanced Practice Registered Nurse  
Fall of every year. 3(3-0) R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major.  
Advanced physiological and pathophysiological mechanisms of the body system to provide the Advanced Practice Registered Nurse a foundation for patient assessment, clinical decision making, and management.  
Effective Spring Semester 2025
- NUR 908      Advanced Physical Assessment for the Advanced Practice Registered Nurse  
Spring of every year. 3(2-3) P: NUR 907 R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major.  
~~Comprehensive assessment across the lifespan including history, physical and psychological assessment of signs and symptoms, pathophysiologic changes, and psychosocial variations of the patient.~~ Comprehensive person-centered health assessments across the lifespan including pathophysiologic changes and psychosocial variations in patients seen by the advance practice nurse.  
Effective Spring Semester 2025
- NUR 909      Advanced Pharmacology for the Advanced Practice Registered Nurse  
Spring of every year. Summer of every year. 3(3-0) P: NUR 907 and NUR 908 R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major.  
~~Application of pharmacotherapeutics for disease conditions including knowledge of pharmacokinetics, pharmacodynamics, pharmacogenetics, pharmacy and toxicology used to guide selection of interventions.~~ Pharmacotherapeutics across the lifespan including pharmacokinetics, pharmacodynamics, and pharmacogenetics used to guide selection of the interventions.  
Effective Spring Semester 2025
- NUR 936      Clinical Nurse Specialist Specialty Role Immersion I  
Fall of every year. 3(0-9) P: NUR 935 R: Open to doctoral students in the College of Nursing or in the Nursing Practice Major.  
~~Clinical application of the essential knowledge, skills, and values associated with the student-selected specialized practice role of the Clinical Nurse Specialist.~~ Advancing clinical and healthcare knowledge to excel in specialized practice roles, enhancing patient outcomes through expert care, leadership, and evidence-based practice  
Request the use of the Pass-No Grade (P-N) system.  
Effective Spring Semester 2025

- NUR 937 Clinical Nurse Specialist Specialty Role Immersion II  
Spring of every year. 3(0-9) P: NUR 936 R: Open to doctoral students in the College of Nursing or in the Nursing Practice Major.  
~~Continuation of NUR 936. Capstone. Advancing clinical and healthcare knowledge to excel in specialized practice roles, enhancing patient outcomes through expert care, leadership, and evidence-based practice.~~  
Request the use of the Pass-No Grade (P-N) system.  
Effective Spring Semester 2025
- NUR 946 Principles of Regional Anesthesia and Point-of-Care Ultrasound  
Fall of every year. 4(4-0) P: NUR 971 R: Open to doctoral students in the College of Nursing or in the Nursing Practice Major.  
Comprehensive instruction in the use of ultrasonography for therapeutic, procedural and diagnostic anesthetic care.  
Effective Spring Semester 2025
- NUR 972 Advanced Principles of Anesthesia I  
Fall of every year. 3(3-0) P: NUR 967 R: Open to doctoral students in the College of Nursing or in the Nursing Practice Major.  
Anesthetic delivery to patients with increasing co-morbidities and complex anesthesia needs.  
Advanced airway management, regional anesthesia and chronic pain management.  
Effective Spring Semester 2025
- NUR 973 Advanced Principles of Anesthesia II  
Spring of every year. 3(3-0) P: NUR 972 R: Open to doctoral students in the College of Nursing or in the Nursing Practice Major.  
Advanced concepts related to nurse anesthesia practice including management of pediatric, obstetric, neurologic, trauma, vascular and cardiothoracic procedures  
Effective Spring Semester 2025
- NUR 995 Doctor of Nursing Practice Project I  
~~Summer of every year. Spring of every year. Summer of every year. 4(2-4) 4(2-2) P: (NUR 902 and NUR 903 and NUR 905 and EPI 810) and (NUR 916 or NUR 926 or NUR 934 or NUR 976) P: (NUR 902 and NUR 903 and NUR 905) and (NUR 916 or NUR 926 or NUR 934 or NUR 976) R: Open to doctoral students in the College of Nursing or in the Nursing Practice Major. R: Open to doctoral students in the College of Nursing.~~  
Introduction of the scholarly practice project for the advanced practice nurse.  
Request the use of the Pass-No Grade (P-N) system.  
Effective Spring Semester 2022
- NUR 996 Doctor of Nursing Practice Project II  
Fall of every year. 3(0-6) P: NUR 904 and NUR 906 and NUR 995 R: Open to doctoral students in the College of Nursing or in the Nursing Practice Major.  
~~Implementation of the scholarly practice project for the advanced practice nurse. Implementation phase of a DNP project aimed at improving healthcare outcomes.~~  
Request the use of the Pass-No Grade (P-N) system.  
Effective Spring Semester 2025
- NUR 997 Doctor of Nursing Practice Project III  
Spring of every year. 3(0-6) P: NUR 996 R: Open to graduate students in the College of Nursing or in the Master of Science in Nursing or in the Nursing Practice Major.  
~~Evaluation and dissemination of the scholarly practice project for the advanced practice nurse. Evaluation and dissemination of a DNP project aimed at improving healthcare outcomes.~~  
Request the use of the Pass-No Grade (P-N) system.  
Effective Spring Semester 2025

### **SCHOOL OF PACKAGING**

- PKG 810 Packaging Professional Seminar  
Fall of every year. Spring of every year. 3(3-0) R: Open to graduate students in the School of Packaging. Not open to students with credit in PKG 860.  
Professional skills and workplace strategies for success in a packaging career Professional development, ethical conduct, leadership competency building, social responsibility and inclusive workplace strategies for academic and career success.  
Effective Fall Semester 2025

### **DEPARTMENT OF PLANT BIOLOGY**

- PLB 443 Restoration Ecology  
Fall of odd years. 3(2-2) Interdepartmental with Biosystems Engineering, Fisheries and Wildlife, Integrative Biology ~~P: FOR 404 or PLB 441 or IBIO 355~~ P: FOR 340 or PLB 441 or IBIO 355 RB: CSS 210 or BE 230  
Principles of ecological restoration of disturbed or damaged ecosystems. Design, implementation, and presentation of restoration plans. Field trips required.  
Effective Fall Semester 2022

### **DEPARTMENT OF POLITICAL SCIENCE**

- PLS 397 Analyzing and Visualizing Data in Politics  
Spring of every year. 3(3-0) ~~P: PLS 201 or PLS 202~~ P: PLS 202  
Exploration and evaluation of political science theories or public policies through empirical analysis; approaches to data and graphical analysis in the political sciences; studies of prominent or emerging political science and policy data sources.  
Effective Fall Semester 2025

### **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 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)~~ P: MTH 103 or MTH 116 or MTH 103B or MTH 124 or LB 117 or (LB 118 or concurrently) 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 Semester 2024
- STT 464 Statistics for Biologists  
Fall of every year. 3(3-0) Interdepartmental with Animal Science, Crop and Soil Sciences ~~P: MTH 103 or MTH 116 or MTH 124 or MTH 132~~ P: MTH 103 or MTH 116 or MTH 124 or MTH 132 or LB 117 or LB 118 or LB 119 ~~RB: STT 421~~  
Biological random variables. Estimation of population parameters. Testing hypotheses. Linear correlation and regression. Analyses of counted and measured data to compare several biological groups including contingency tables and analysis of variance.  
Effective Fall Semester 2024

### **DEPARTMENT OF TEACHER EDUCATION**

- TE 938 Qualitative Data Analysis  
Fall of every year. 3(3-0) P: TE 931  
Qualitative data analysis tools and techniques; approaches and theories that inform and guide the analysis, interpretation, and representation of qualitative data.  
Effective Fall Semester 2025

- TE 939A      Special Topics in Advanced Qualitative Methodology  
Fall of even years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: TE 931  
Special topics in advanced methods of qualitative research in education.  
Effective Fall Semester 2025
- TE 939B      Advanced Qualitative Methods: Critical Ethnography  
Spring of odd years. 3(3-0) P: TE 931  
Critical theories—postmodernism, poststructuralism, poscolonialism, feminism, queer theory—and their implications for conceptualizing, conducting, analyzing, and representing one's research. Political and ethical dimensions inherent in qualitative research as well as the amalgamation of epistemology, ontology, and methods into a coherent and purposeful methodology that is ethical, reciprocal, and praxical.  
Effective Fall Semester 2025
- TE 939C      Advanced Qualitative Methods: Discourse Analysis  
Spring of even years. 3(3-0) P: TE 931  
Discourse analytic approaches to research in education and related areas of inquiry through an interdisciplinary lens and traditions that range from interactional sociolinguistics and narrative analysis to conversation analysis and critical discourse analysis.  
Effective Fall Semester 2025
- TE 939E      Advanced Qualitative Methods: Humanities Oriented Research  
Fall of odd years. 3(3-0) P: TE 931  
Research traditions in history, philosophy, literary criticism, arts, narrative inquiry, language, communication arts, ethics, religion, curriculum theory, and cultural studies. Epistemology, theory, arts, values, and history of science.  
Effective Fall Semester 2025
- TE 939F      Advanced Qualitative Methods: Phenomenology  
Spring of odd years. 3(3-0) P: TE 931  
Phenomenological methodologies to study the caring professions (education and related fields). Exploring participants' subjective experiences and interpretations of the phenomenon being studied.  
Effective Fall Semester 2025
- TE 939G      Advanced Qualitative Methods: Humanizing Research—Decolonizing Qualitative Inquiry  
Fall of even years. 3(3-0) P: TE 931  
Conducting qualitative research for justice with individuals and groups who are marginalized by systems of inequality; contemporary methodological dilemmas and innovations. Building relationships of dignity and care; reciprocity and dialogic consciousness-raising; and ways in which research might be considered an answer to pressing social and educational problems.  
Effective Fall Semester 2025