

**MICHIGAN STATE UNIVERSITY**

**Report of**  
**THE UNIVERSITY COMMITTEE ON CURRICULUM**  
**to the Faculty Senate**  
**November 21, 2023**

*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

November 21, 2023

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

November 21, 2023

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 COMMUNICATION ARTS AND SCIENCES**

1. Change the requirements for the **Master of Arts** degree in **Communication** in the Department of Communication. The University Committee on Graduate Studies (UCGS) approved this request at its October 16, 2023 meeting.

*The concentrations in the Master of Arts degree in Communication are noted on the student's academic record when the requirements for the degree have been completed.*

- a. Under the heading **Requirements for the Master of Arts Degree in Communication** replace the entire entry with the following:

The student must complete the requirements for Plan A (with thesis) or Plan B (without thesis) as specified below:

	CREDITS
<b>Predocutorial (Plan A)</b>	30
Only Plan A (with thesis) is available to students in the master's degree program in communication who elect the predoctoral concentration.	
The student must complete at least 30 credits for the degree including:	
1. All of the following courses (13 credits):	
COM 803 Introduction to Quantitative Research Methods	3
COM 820 Communication Theory and Process	3
COM 830 Applied Communication Research II	3
COM 899 Master's Thesis Research	4
2. Nine to eleven additional credits in Communication courses approved by the student's academic advisor.	
3. Six to eight credits in courses outside the Department of Communication approved by the student's academic advisor.	
4. Completion of a master's thesis.	

One of the following concentrations (Plan B):

**Knowledge Utilization**

Only Plan B (without thesis) is available to students in the master's degree program in communication who elect the knowledge utilization concentration. The student must complete at least 30 credits for the degree including:

1. Both of the following courses (6 credits):

COM 803 Introduction to Quantitative Research Methods	3
COM 820 Communication Theory and Process	3
2. Nine to 17 additional credits in Communication courses approved by the student's academic advisor.
3. Seven to 15 credits in courses outside the Department of Communication approved by the student's academic advisor.

The final certifying examination is a written and oral examination that focuses on the student's course work.

**Communication Science Research and Analytics**

Only Plan B (without thesis) is available to students in the master's degree program in communication who elect the communication science research and analytics concentration.

The student must complete at least 30 credits for the degree including:

1. All of the following courses (12 credits):
 

COM	803	Introduction to Quantitative Research Methods	3
COM	820	Communication Theory and Process	3
COM	830	Applied Communication Research II	3
COM	893	Practicum	3

The practicum is arranged with approval from the student's advisor and the MA Director and can include a semester-long project conducted with an outside group or substantial work conducted with a Communication faculty-led research team.

2. Complete 9 credits from the following. It is strongly recommended that students take at least one course from each group. Students who opt to substitute a different course for each of the Groups listed should receive approval from their advisor and the MA Director prior to enrollment.

*Communication Survey Design and Implementation*

COM	804	Survey Design for Communication Research	3
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*Biobehavioral Communication Research Methods*

CAS	892	Special Topics	
		Section: Media Neuroscience and Behavioral	
		Communication Research	3

*Computational Communication Research*

CAS	892	Special Topics	
		Section: Computational Social Science: Principles and	
		Applications	3

CSE	842	Natural Language Processing	3
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CSE	881	Data Mining	3
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3. Nine to 17 additional credits in Communication courses approved by the student's academic advisor.

The final certifying examination is a written and oral examination that focuses on the student's course work to be completed in the final semester in program.

Effective Fall 2024.

**COLLEGE OF MUSIC**

1. Change the requirements for the **Master of Music in Music Theory** in the College of Music. The University Committee on Graduate Studies (UCGS) approved this request at its October 16, 2023 meeting.

- a. Under the heading **Requirements for the Master of Music Degree in Music Theory** replace the entire entry with the following:

The program is available only under Plan B (without thesis). A total of 30 credits are required for the degree. The student's program of study must be approved by the student's academic advisor, who must be a member of the music theory faculty. The student must meet the requirements specified below:

1. All of the following courses (15 credits):
 

MUS	874	Schenkerian Analysis	2
MUS	876	Keyboard Skills and Practical Musicianship	3
MUS	970	Pedagogy of Theory I	3
MUS	971	Pedagogy of Theory II	3
MUS	974	Proseminar in Post-Tonal Theory and Analysis	2
MUS	979	Proseminar in Music Theory	2

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

MUS	870	Advanced Modal Counterpoint	3
MUS	871	Advanced Tonal Counterpoint	3

Students who take both MUS 870 and 871 may count one of the courses toward requirement 3., below.

3. A minimum of 5 credits from the following courses:

MUS	875	Analysis of Musical Scores	3
MUS	976	Performance and Analysis	3
MUS	977	Schenkerian Analysis II	3
MUS	978	Analysis of Contemporary Music	2
4. Complete two semesters of MUS 973 Readings in Music Theory totaling 4 credits. If a student completes a third semester of MUS 973, it may be counted towards requirement 3. above.
5. Complete 3 credits in musicology at the 400-level or above. MUS 830 may not be used to fulfill this requirement.
6. Participate in music activities during two semesters of enrollment in the program. The activities must be approved in advance by the student's academic advisor and selected from band, chamber ensemble, chorus, jazz band, new-music ensemble, or orchestra.
7. Complete a Teaching Demonstration. The demonstration must take place after the student has completed MUS 970 Pedagogy of Theory I. The demonstration will occupy a class period of an undergraduate course in music theory to be determined by the area chairperson. It will be graded by a three-person committee selected by the area chairperson and comprised of the course supervisor, another member of the music theory faculty, and one faculty member from outside the area. The grade will be pass/fail, based upon a majority vote of the three committee members.
8. Complete a capstone research project publicly at a music theory colloquium, to be advised and approved by a member of the music theory faculty. The project may be on either a research-related or a pedagogical topic, and must be similar in scope and format to a conference presentation. Students may choose a project begun or completed as part of a graduate seminar in music theory (such as MUS 971, MUS 973, MUS 974, MUS 977, MUS 978, or MUS 979) and revise or expand it as determined by the faculty advisor, or they may work on a new project or an expansion of a research paper from a different course.

Effective Fall 2024.

2. Change the requirements for the **Master of Arts** degree in **Musicology** in the College of Music. The University Committee on Graduate Studies (UCGS) approved this request at its October 16, 2023 meeting.
  - a. Under the heading **Requirements for the Master of Arts Degree in Musicology** make the following changes:
    - (1) Under the heading **Requirements for Both Plan A and Plan B**, replace the entire entry with the following:
      1. Complete the following course (3 credits):

MUS	830	Research Methods and Materials in Music	3
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      2. Complete 15 credits of musicology courses in addition to MUS 830. At least three courses must be at the 800-level or above. If a 400-level course is to be used to satisfy this requirement, the student must enroll concurrently in 1 credit of MUS 892A. Students may count up to 3 credits of MUS 890 (Independent Study) toward this requirement. Students interested in ethnomusicology are encouraged to take MUS 833.
      3. Complete 2 or 3 credits in music theory.
      4. Complete 3 credits in a cognate outside the College of Music. Both the cognate area and the related courses must be approved by musicology area faculty.
      5. Demonstrate a reading knowledge of a language other than English. Credits in courses in a foreign language may not be counted toward the requirements for the Master of Arts degree in musicology.
      6. Complete 4 or 5 additional credits in music excluding musicology and MUS 898 and MUS 899.
      7. Attend all area colloquia and guest lectures as approved by faculty.

- (2) Under the heading **Academic Standards** replace the paragraph with the following:

A grade of 3.0 or higher is required for Music 898 and 899.

Effective Fall 2024.

### **COLLEGE OF NATURAL SCIENCE**

1. Delete the curriculum and degree requirements for the **Predental** (Non-Degree) major preference option in the College of Natural Science. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request at its September 7, 2023 meeting. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Spring 2020. No students are to be readmitted to the program effective Spring 2020. Effective Fall 2023, coding for the program will be discontinued and the program will no longer be available in the College of Natural Science. Students who have not met the requirements for the Predental major preference through the College of Natural Science prior to Fall 2023 will have to change their major.

2. Delete the curriculum and degree requirements for the **Premedical** (Non-Degree) major preference option in the College of Natural Science. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request at its September 7, 2023 meeting. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Spring 2020. No students are to be readmitted to the program effective Spring 2020. Effective Fall 2023, coding for the program will be discontinued and the program will no longer be available in the College of Natural Science. Students who have not met the requirements for the Premedical major preference through the College of Natural Science prior to Fall 2023 will have to change their major.

3. Delete the curriculum and degree requirements for the **Preoptometry** (Non-Degree) major preference option in the College of Natural Science. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request at its September 7, 2023 meeting. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Spring 2020. No students are to be readmitted to the program effective Spring 2020. Effective Fall 2023, coding for the program will be discontinued and the program will no longer be available in the College of Natural Science. Students who have not met the requirements for the Preoptometry major preference through the College of Natural Science prior to Fall 2023 will have to change their major.

## **PART II - NEW COURSES**

### **DEPARTMENT OF COMMUNICATION**

- COM 804 Survey Design for Communication Research  
Spring of every year. 3(3-0) R: Open to graduate students in the College of Communication Arts and Sciences.  
Explore the role of surveys in research, including interpreting, critically evaluating, and designing surveys. Recent developments and challenges such as declines in response rates, the rise of convenience samples, concerns about respondent trolling, and critiques of recent election polling. Sources of error in survey research using the classic Total Survey Error framework.  
Effective Fall Semester 2024

### **DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES**

- GLG 825 Organic Geochemistry  
Fall of odd years. 3(3-0) RB: At least one of, Environmental Geochemistry, Organic Chemistry, or Biochemistry
- NEW Application of organic molecules, elements and isotopes as an indicator of the sources, reactions and fates of biogenic substances in natural waters, sediments, and soils. Corresponding concepts, experimental strategies and analytical methods.  
Effective Fall Semester 2023

### **MSU COLLEGE OF LAW**

- LAW 572M Supply Chain Law  
On Demand. 0 to 6 credits. R: Open to students in the MSU College of Law.  
Legal issues in our increasingly global supply chains and how lawyers address those issues.  
Effective Fall Semester 2024
- LAW 572N Law Practice Technology  
On Demand. 0 to 6 credits. R: Open to students in the MSU College of Law.  
Current and future uses of technology in the day-to-day practice of law with an emphasis on the tool categories most likely to be used by new lawyers.  
Effective Spring Semester 2024
- LAW 572P Legal Operations  
On Demand. 0 to 6 credits. R: Open to students in the MSU College of Law.  
Field of legal operations, including technology, process improvement, project management, business of law, litigation support, innovation that is changing the way law departments and some law firms are delivering legal services.  
Effective Spring Semester 2024

### **COLLEGE OF NATURAL SCIENCE**

- CMB 855 Advanced Mammalian Genetics  
Fall of every year. 1(1-0) RB: Molecular biology and genetics R: Open to graduate students in the Department of Animal Science or in the Department of Biochemistry and Molecular Biology or in the Department of Biomedical Engineering or in the BioMolecular Science or in the Program in Cell and Molecular Biology or in the Genetics Program or in the Department of Microbiology and Molecular Genetics or in the Department of Pharmacology and Toxicology or in the Department of Physiology or approval of department.  
Basic and modern techniques in mouse genetics including Targeted Mutagenesis, Crispr gene editing, Cre-Lox recombination, Tissue and time specific gene ablation, Lineage Tracing, Live Imaging for mutational analysis and Bulk and Single Cell RNA-sequencing  
Effective Fall Semester 2024

**DEPARTMENT OF PLANT, SOIL AND MICROBIAL SCIENCES**

CSS 292 Career Leadership in Agriculture  
Spring of every year. 2(2-0) Interdepartmental with Agricultural, Food, and Resource Economics and Animal Science and Horticulture. Not open to students with credit in AT 214.  
Leadership development, styles, and evaluations within agriculture.  
SA: AEE 110, AEE 111  
Effective Fall Semester 2023

**DEPARTMENT OF TEACHER EDUCATION**

TE 970 Curriculum and Pedagogy in Teacher Education  
Spring of even years. 3(3-0)  
REINSTATEMENT Teacher learning opportunities at the preservice, induction, and inservice levels. Intended and enacted curriculum, sources of pedagogy, and their impact on teachers' knowledge, skills, and attitudes.  
Effective Spring Semester 2024

## **PART III – COURSE CHANGES**

### **DEPARTMENT OF ADVERTISING AND PUBLIC RELATIONS**

- PR 300 Public Relations Theory and Ethics  
Fall of every year. Spring of every year. 3(3-0) ~~P: ADV 260 or concurrently~~ P: PR 260 or concurrently  
Theories of public relations, persuasion, social media interaction and mass communication as they apply to public relations, audience analysis and application of social media strategies. Theories of ethics, ethical codes in public relations and the ethical challenges in this field.  
Effective Spring Semester 2024
- PR 305 Methods of Public Relations Inquiry  
Fall of every year. Spring of every year. 3(3-0) ~~P: (ADV 260 or concurrently) and (MTH 101 or MTH 102 or STT 200)~~ P: (PR 260 or concurrently) and (MTH 101 or MTH 102 or STT 200)  
Nature and conduct of public relations inquiry. Formative research methods, data analytics and evaluative measures used for public relations campaign planning. Drawing samples, collecting and analyzing data, interpreting and reporting results.  
Effective Spring Semester 2024
- PR 310 Diversity, Equity, and Inclusion in Public Relations and Advertising  
Fall of every year. Spring of every year. 3(3-0) ~~P: ADV 260 or concurrently~~ P: PR 260 or concurrently  
Exploration of issues pertaining to diversity, equity and inclusion (DEI) as they impact the practice of public relations and advertising within the United States and globally. Effective cross-cultural communication practices.  
Effective Spring Semester 2024

### **DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR GENETICS**

- BMB 855 Special Problems  
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.  
Laboratory or library research on special problems in biochemistry.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.  
SA: BCH 855  
~~Effective Fall Semester 2004~~ Effective Spring Semester 2024

### **SCHOOL OF CRIMINAL JUSTICE**

- CJ 220 Criminology  
Fall of every year. Spring of every year. 3(3-0) ~~R: Open to students in the Peace and Justice Studies Minor or in the Law, Justice, and Public Policy Minor or in the Youth and Society Minor or in the Criminal Justice Major or in the Conservation and Environmental Law Enforcement Minor or approval of school.~~ R: Open to students in the Criminal Justice Major or in the Law, Justice, and Public Policy Minor or in the Peace and Justice Studies Minor or in the Security Management Minor or in the Youth and Society Minor or in the Conservation and Environmental Law Enforcement Minor or in the Humanities-Prelaw Major or approval of school.  
Introduction to the socio-legal foundation of crime. Crime typology and measurement procedures. Theory and public policy. Societal responses to crime and criminals.  
~~Effective Summer Semester 2022~~ Effective Spring Semester 2024

- CJ 335 Policing  
Fall of every year. Spring of every year. 3(3-0) P: CJ 110 and CJ 220 ~~R: Open to juniors or seniors in the Criminal Justice Major or in the Conservation and Environmental Law Enforcement Minor.~~ R: Open to juniors or seniors or sophomores in the Criminal Justice Major or in the Conservation and Environmental Law Enforcement Minor.  
Roles, responsibilities, issues, and trends pertinent to contemporary law enforcement organizations in contemporary society.  
~~Effective Fall Semester 2019~~ Effective Spring Semester 2024
- CJ 355 Juvenile Justice  
Fall of every year. Spring of every year. 3(3-0) ~~P: CJ 110 and CJ 220 R: Open to juniors or seniors in the Peace and Justice Studies Minor or in the Criminal Justice Major.~~ R: Open to juniors or seniors or sophomores in the Criminal Justice Major or in the Peace and Justice Studies Minor.  
The juvenile justice system and law. Theories of juvenile delinquency and deviance. Sociological, psychological, and anthropological perspectives.  
~~Effective Fall Semester 2019~~ Effective Spring Semester 2024
- CJ 365 Corrections  
Fall of every year. Spring of every year. 3(3-0) P: CJ 110 and CJ 220 ~~R: Open to juniors or seniors in the Criminal Justice Major.~~ R: Open to juniors or seniors or sophomores in the Criminal Justice Major.  
Historical and contemporary views of offender management and treatment. Corrections system operation. Effects of institutionalization. Alternatives to incarceration.  
~~Effective Fall Semester 2019~~ Effective Spring Semester 2024
- CJ 385 Private Security  
Fall of every year. 3(3-0) P: CJ 110 and CJ 220 ~~R: Open to juniors or seniors in the Criminal Justice Major or in the Security Management Minor.~~ R: Open to juniors or seniors or sophomores in the Criminal Justice Major.  
Relationships of private protective services with public law enforcement. Individuals, businesses, and governments providing prevention, protection, investigation, and disaster recovery services. Protection of persons, property, and information.  
~~Effective Fall Semester 2019~~ Effective Spring Semester 2024
- CJ 395 Race, Crime and Justice  
Fall of every year. Spring of every year. 3(3-0) ~~P: CJ 110 P: CJ 110 and CJ 220 R: Open to juniors or seniors in the Criminal Justice Major.~~ R: Open to juniors or seniors or sophomores in the Criminal Justice Major.  
How race and ethnicity shapes crime, victimization, ones' interaction with the criminal justice system, and criminal justice decision making. Crime rates in theoretical and historical context.  
~~Effective Fall Semester 2024~~ Effective Spring Semester 2024
- CJ 422 Comparative and Historical Criminal Justice  
Spring of every year. 3(3-0) P: CJ 110 ~~R: Open to juniors or seniors in the Criminal Justice Major.~~ R: Open to juniors or seniors in the Criminal Justice Major or in the Peace and Justice Studies Minor.  
Comparative study of criminal justice systems. Theories, types, and effects of intervention.  
~~Effective Fall Semester 2019~~ Effective Spring Semester 2024
- CJ 424 Crime, Mass Media, and Society (W)  
Spring of every year. 3(3-0) P: Completion of Tier I Writing Requirement ~~R: Open to seniors in the School of Criminal Justice.~~ R: Open to seniors or juniors in the School of Criminal Justice.  
Representation of crime and criminal justice in the media. Relationship between media and criminal justice organizations. Images of crime, criminal justice, and trafficking. Media effects on criminal justice policy.  
~~Effective Fall Semester 2019~~ Effective Spring Semester 2024

- CJ 425 Gender, Sexuality, Crime and Justice  
Spring of every year. 3(3-0) Interdepartmental with Women's Studies. RB: CJ 220 or WS 201 ~~R: Open to juniors or seniors.~~ R: Open to juniors or seniors in the Criminal Justice Major or in the Peace and Justice Studies Minor.  
Theories on how gender and sexuality explain victimization and crime. How gender and sexuality shape experiences as victims, offenders, and criminal justice employees. Intersectionality with race and class. Laws and their effects on rights based on gender and sexuality in the criminal justice system.  
~~Effective Fall Semester 2024~~ Effective Spring Semester 2024
- CJ 802 Proseminar in Law Enforcement Intelligence Operations  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) ~~R: Open to graduate students in the Criminal Justice major or in the Law Enforcement Intelligence and Analysis major.~~ R: Open to graduate students in the School of Criminal Justice.  
Law enforcement intelligence as an analytic tool for case development and resource allocation. Historical, ethical, legal, and operational issues affecting current practice.  
~~Effective Spring Semester 2014~~ Effective Spring Semester 2024
- CJ 803 Foundations in Homeland Security  
Spring of every year. 3(3-0) ~~R: Open to graduate students in the Criminal Justice major or in the Law Enforcement Intelligence and Analysis major.~~ R: Open to graduate students in the School of Criminal Justice.  
Homeland security's definition of terrorism and terrorist groups. Fundamental principles of emergency management and homeland security. Historical perspectives and modern threats. Public health and environmental protections. Private sector role and impacts. Security versus civil liberties. Science technology and research issues.  
~~Effective Fall Semester 2019~~ Effective Spring Semester 2024
- EC 360 Private Enterprise and Public Policy  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: EC 201 or EC 251H Not open to students with credit in EC 460.  
Effects of antitrust, economic regulation, and other public policies on competition, monopoly, and other market problems in the United States economy.  
~~Effective Fall Semester 2014~~ Effective Spring Semester 2024

### DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES

- GLG 303 Oceanography  
Fall of every year. 3(3-0) Interdepartmental with Integrative Biology. ~~P: (CEM 141 or CEM 181H or LB 171 or CEM 151) and (PHY 231 or PHY 183 or PHY 193H or LB 273 or PHY 183B or PHY 231C or PHY 241)~~ P: (CEM 141 or CEM 181H or LB 171 or CEM 151) and (PHY 231 or PHY 183 or PHY 193H or LB 273 or PHY 183B or PHY 231C or PHY 241 or PHY 173 or PHY 221)  
Physical, chemical, biological, and geological aspects of oceanography: ocean circulation, waves, tides, air-sea interactions, chemical properties of ocean water, ocean productivity, shoreline processes, and sediments.  
~~Effective Summer Semester 2020~~ Effective Spring Semester 2024
- GLG 321 Mineralogy and Geochemistry  
Fall of every year. 4(3-2) ~~P: GLG 201 and (CEM 142 or CEM 152 or CEM 182H or LB 172) and (MTH 132 or MTH 152H or LB 118)~~ P: (GLG 201) and (CEM 142 or CEM 152 or CEM 182H or LB 172 or MSE 250) and (MTH 132 or MTH 152H or LB 118 or MTH 124)  
Earth materials and their origin, modification, structure, dynamics and history. Crystallography and crystal chemistry, and geochemical properties and processes in mineral crystallization and recrystallization. Analytical identification and characterization of minerals in their lithologic context.  
~~Effective Fall Semester 2017~~ Effective Spring Semester 2024

- GLG 361 ~~Igneous and Metamorphic Geochemistry and Petrology~~  
Igneous and Metamorphic Geochemistry and Petrology (W)  
Spring of every year. 4(3-2) P: ~~GLG 324~~ GLG 321 and completion of Tier I writing requirement.  
Evolution, origin, occurrence and tectonic setting of igneous and metamorphic rocks.  
Phase relations of igneous and metamorphic systems. Studies of rocks in thin sections.  
Field trip required.  
SA: GLG 461  
~~Effective Fall Semester 2017~~ Effective Spring Semester 2024
- GLG 435 ~~Geomicrobiology~~  
Geomicrobiology (W)  
Spring of odd years. 4(3-2) Interdepartmental with Microbiology and Molecular Genetics. RB: GLG 201 or MMG 201 or BS 161 or LB 145 P: Completion of Tier I writing requirement. R: Open to juniors or seniors or graduate students in the College of Natural Science or in the Lyman Briggs College.  
Geological and microbiological perspectives on microbial activities in diverse environmental settings, including geological change mediated by microorganisms, microbial evolution driven by geologically diverse habitats.  
~~Effective Spring Semester 2021~~ Effective Spring Semester 2024
- GLG 470 Solid Earth Geophysics and Geodynamics  
Spring of odd years. 3(3-0) P: ~~GLG 201 and (MTH 133 or LB 110 or MTH 153H) and (PHY 183 or PHY 183B or PHY 193H or PHY 233B or LB 273)~~ P: (GLG 201) and (MTH 133 or LB 119 or MTH 153H or MTH 126) and (PHY 183 or PHY 183B or PHY 193H or PHY 233B or LB 273 or PHY 173 or PHY 221 or PHY 241 or PHY 231 or PHY 231C) RB: (MTH 234 or concurrently) or (LB 220 or concurrently) or (MTH 254H or concurrently)  
Theory and applications of solid-earth geophysics including geochronology, geothermics, geomagnetism and paleomagnetism, geodesy and gravity, rheology, and seismology.  
SA: GLG 472  
~~Effective Fall Semester 2017~~ Effective Spring Semester 2024
- GLG 471 Applied Geophysics  
~~Fall of every year.~~ Spring of every year. 4(3-2) P: ~~((MTH 133 or concurrently) or (LB 110 or concurrently) or (MTH 153H or concurrently)) and ((PHY 184 or concurrently) or (PHY 184B or concurrently) or (PHY 232 or concurrently) or (PHY 232C or concurrently) or (PHY 294H or concurrently) or (LB 274 or concurrently))~~ P: ((MTH 133 or concurrently) or (LB 119 or concurrently) or (MTH 153H or concurrently) or (MTH 126 or concurrently)) and ((PHY 184 or concurrently) or (PHY 184B or concurrently) or (PHY 232 or concurrently) or (PHY 232C or concurrently) or (PHY 294H or concurrently) or (LB 274 or concurrently) or (PHY 174 or concurrently) or (PHY 222 or concurrently) or (PHY 242 or concurrently)) R: Not open to freshmen or sophomores.  
Application of seismic, gravity, magnetic, resistivity, and electromagnetic methods to problems related to engineering studies, mineral and oil exploration, groundwater, subsurface mapping, pollution, and hazardous waste.  
~~Effective Fall Semester 2017~~ Effective Spring Semester 2024

### DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION

- HNF 894 Human Nutrition Practicum  
Fall of every year. Spring of every year. ~~Summer of every year. 1 to 6 credits. 3 credits.~~ A student may earn a maximum of 6 credits in all enrollments for this course. ~~R: Open only to graduate students in the Department of Food Science and Human Nutrition.~~ R: Open to graduate students in the Nutrition and Dietetics Major.  
Experience in agencies or offices related to Human Nutrition. Field experience required.  
Request the use of the Pass-No Grade (P-N) system.  
~~Effective Summer Semester 2006~~ Effective Spring Semester 2024

### SCHOOL OF HOSPITALITY BUSINESS

- HB 203 Hospitality Communication  
Fall of every year. Spring of every year. 3(3-0) P: WRA 101 R: Open to students in the Hospitality Business Major. Not open to students with credit in COM 100 or COM 225 or MKT 250.  
~~Effective hospitality business communication. Selecting appropriate formats for the audience. Developing and delivering effective presentations. Analyzing, writing and revising hospitality business documents. Spotting, correcting and avoiding common writing pitfalls.~~ Effective hospitality business communication. Selecting appropriate formats for the audience. Developing and delivering effective oral and written presentations designed to inform or persuade. Analyzing, writing, and revising hospitality business documents. Spotting, correcting, and avoiding common writing pitfalls.  
~~Effective Summer Semester 2020~~ Effective Fall Semester 2024
- HB 265 ~~Hospitality Foodservice Systems~~  
Hospitality Foodservice Systems I  
Fall of every year. Spring of every year. 3(3-0) ~~R: Not open to seniors.~~ R: Open to students in the Hospitality Business Major.  
~~Food and Beverage systems that enhance food safety and quality management. Standards of microbiology, sanitation, and other quality control issues in foodservice operations. Chemical, health, and workplace safety standards. Introduction of fundamental principles of cost control concepts and techniques at different control points. Food allergen management practices and food safety technology highlighted. Emerging trends that affect different segments of food and beverage operations.~~ Overview of the food and beverage service industry and various food and beverage concepts and systems, applicable to different food and beverage business models, including quick service restaurants, multi-unit, casual theme restaurants, fine dining restaurant, hotel food service operations, workplace hospitality, country club food and beverage operations, and specialty food services such as sports venues and theme parks. Opportunities and challenges facing managers in maintaining a safe food production and service environment. Current emerging topics in the foodservice industry.  
~~Effective Summer Semester 2024~~ Effective Fall Semester 2024

### COLLEGE OF NURSING

- NUR 924 Designing Interventions for Improving Health Outcomes  
~~Fall of every year. Summer of every year.~~ 3(3-0) P: NUR 921 and NUR 939 or approval of college  
R: Open to doctoral students in the College of Nursing or in the Nursing Major.  
Foundation for designing, implementing and evaluating nursing interventions for wellness, risk reduction, and chronic illness management across the lifespan.  
~~Effective Spring Semester 2022~~ Effective Fall Semester 2023

### DEPARTMENT OF PLANT, SOIL AND MICROBIAL SCIENCES

- CSS 192 Professional Development Seminar I  
Fall of every year. 1(0-2) ~~R: Open to students in the Department of Plant, Soil and Microbial Sciences.~~ R: Open to students in the Department of Plant, Soil and Microbial Sciences and students in the Institute of Agricultural Technology Agricultural Industries Certificate Program.  
~~Career development, critical issues analysis, resume writing, scientific presentations and public speaking in crop and soil sciences.~~ Career exploration and preparation, and written, verbal, and visual communication in crop and soil sciences  
Request the use of the Pass-No Grade (P-N) system.  
~~Effective Fall Semester 2016~~ Effective Spring Semester 2024

CSS 492

~~Professional Development Seminar II~~

Professional Development Seminar II (W)

Fall of every year. 1(0-2) ~~P: (CSS 192 or CSS 262) and (CSS 210 and completion of Tier I Writing requirement)~~ P: (CSS 192 or CSS 262) and Completion of Tier I Writing Requirement R: Open to seniors in the Department of Plant, Soil and Microbial Sciences.

~~Synthetic, integration and application of agronomic principles to current issues in agronomy via discussion and oral and written communication. Professionalism and proficiency in oral and written communication skills in agronomy and turfgrass, including life skills.~~

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

~~Effective Spring Semester 2014~~ Effective Spring Semester 2024