

SUBCOMMITTEE A – AGENDA

Via Zoom
September 16, 2021
1:30 p.m.

PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

1. Request to change the requirements for the **Master of Science** degree in **Food Science** in the Department of Food Science and Human Nutrition. The University Committee on Graduate Studies will consider this request at its September 20, 2021 meeting.
 - a. Under the heading **Requirements for the Master of Science Degree in Food Science** make the following changes:
 - (1) Change the total credits required for the degree from '32' to '30'.
 - (2) Replace items 1. through 3. with the following:

Students must:

 1. Complete 16 credits at the 800-level or above. Two courses (6 credits) must be FSC courses excluding FSC 890, 892, 898, and 899.
 2. Complete a minimum of 7 credits (Plan A) or 12 credits (Plan B) of focused course work in consultation with the major advisor and guidance committee.
 3. Complete 1 credit of FSC 892 Food Science Seminar, in which students will present one seminar. Students may re-enroll in FSC 892 for a maximum of 2 credits towards the master's degree.
 - (3) Under **Additional Requirements for Plan A** replace item 1. with the following:
 1. Complete 6 credits in FSC 899 Master's Thesis Research. Students may not earn more than 10 credits in FSC 899.
 - (4) Under **Additional Requirements for Plan B** replace item 1. with the following:
 1. Complete 1 credit of FSC 898 Master's Research. Students may not earn more than 5 credits in FSC 898.

Effective Spring 2022.

2. Request to change the requirements for the **Minor in Agronomy** in the Department of Plant, Soil and Microbial Sciences.
 - a. Under the heading **Minor in Agronomy** make the following changes:
 - (1) Change the total credits required for the minor to 'a minimum of 16 credits'.
 - (2) Delete items 2., 3., and 4. and replace with the following:
 2. Complete 6 credits from following courses:

CSS	135	Crop Scouting and Investigation	3
CSS	151	Seed and Grain Quality	2
CSS	201	Forage Crops	3
CSS	212	Advanced Crop Production	2
CSS	222	New Horizons in Biotechnology	2
CSS	251	Organic Farming Principles and Practices	3
CSS	326	Weed Science	2
And			
CSS	226L	Weed Science Laboratory	1
CSS	330	Soil Chemistry	2
CSS	340	Applied Soil Physics	2

CSS	350	Introduction to Plant Genetics	3
CSS	360	Soil Biology	3
CSS	420	Cover Crops in Agroecosystems	3
CSS	441	Plant Breeding and Biotechnology	3
CSS	442	Agroecology Ecology	3
CSS	467	Bioenergy Feedstock Production	3
CSS	470	Soil Resources	3

Effective Spring 2022.

3. Request to change the name of the **Graduate Specialization in Ecological Food and Farming Systems** to **Sustainable Agriculture and Food Systems** in the Department of Plant, Soil and Microbial Sciences. The University Committee on Graduate Studies (UCGS) will consider this request at its September 20, 2021 meeting.

Students admitted to the major prior to Spring 2022 will be awarded a Graduate Specialization in Ecological Food and Farming Systems.

Students admitted to the major Spring 2022 and forward will be awarded a Graduate Specialization in Sustainable Agriculture and Food Systems.

Effective Spring 2022.

4. Request to change the requirements for the **Graduate Specialization in Sustainable Agriculture and Food Systems** in the Department of Plant, Soil and Microbial Sciences. The University Committee on Graduate Studies (UCGS) will consider this request at its September 20, 2021 meeting.

- a. Under the heading **Graduate Specialization in Sustainable Agriculture and Food Systems** replace the entire entry with the following:

The student must complete 9 credits from the following:

1. Both of the following courses (3 credits):

CSS	824	Sustainable Agriculture and Farming Systems Field Practicum	2
CSS	826	Sustainable Agriculture and Farming Systems Capstone Seminar	1
2. One of the following courses (3 credits):

CSS	424	Sustainable Agriculture and Food Systems: Integration and Synthesis	3
CSS	431	International Agricultural Systems	3
CSS	442	Agricultural Ecology	3
CSS	893	Special Topics	3
ENT	479	Organic Pest Management (W)	3
ENT	848	Biological Control of Insects and Weeds	3
HRT	486	Biotechnology in Agriculture: Applications and Ethical Issues	3
3. One of the following courses (3 credits):

AFRE	400	Public Policy Issues in the Agri-Food System	3
AFRE	861	Agriculture in Economic Development	3
CSUS	463	Food Fight: Politics of Food	3
CSUS	811	Community, Food and Agriculture: A Survey	3
CSUS	838	Participatory Modes of Inquiry	3
CSUS	848	Community Based Natural Resource Management in International Development	3
CSUS	855	Political Ecology of Food	3
CSUS	858	Gender Justice and Environmental Change: Issues and Concepts	3
GEO	410	Geography of Food and Agriculture	3
HNF	406	Global Foods and Culture	3

Effective Spring 2022.

5. Request to change the requirements for the **Minor in Turfgrass Management** in the Department of Plant, Soil and Microbial Sciences.

a. Under the heading **Requirements for the Minor in Turfgrass Management** make the following changes:

(1) In item 2., under **Management of Turfgrass Pests** delete the following course:

CSS	288	Principles of Weed Management	3
ENT	364	Turfgrass Entomology	3

Add the following courses:

CSS	326	Weed Science	2
and			
CSS	226L	Weed Science Laboratory	1
ENT	264	Turfgrass Entomology	3

Effective Spring 2022.

COLLEGE OF NATURAL SCIENCE

1. Request to change the requirements for the **Bachelor of Science** degree in **Data Science** in the Department of Computational Mathematics, Science, and Engineering.

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

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

b. One course from each of the following groups (8 to 10 credits):

(1)	LB	173	Studio Physics for Scientists and Engineers I	5
	LB	273	Physics I	4
	PHY	183	Physics for Scientists and Engineers I	4
(2)	LB	174	Studio Physics for Scientists and Engineers II	5
	LB	274	Physics II	4
	PHY	184	Physics for Scientists and Engineers II	4

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

CSE	404	Introduction to Machine Learning	3
-----	-----	----------------------------------	---

Effective Spring 2022.

PART II - NEW COURSES AND CHANGES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

FOR 810	Forestry Field Techniques Summer of every year. Huron-Manistee National Forest 2(0-4) R: Open to graduate students in the Department of Forestry
NEW	Introduction to professional forestry field techniques, including tree biology, forest ecology, soil science, silviculture, forest inventory and forest management in a variety of forest ecosystems across Michigan. Field trips required. Offered second half of semester. Effective Summer 2021
FOR 812	Forest Measurements and Inventory Fall of every year. 2(1-2) P: FOR 810 R: Open to graduate students in the Department of Forestry.
NEW	Land measurement, units of timber measure, estimating volume of standing trees, sampling methods for forest inventory, integrating remotely-sensed and ground-based inventory. Offered first half of semester. Effective Fall 2021
FOR 814	Tree Biology Fall of every year. 2(1-2) P: FOR 810 R: Open to graduate students in the Department of Forestry.
NEW	Systematics and identification of trees; ecophysiology of tree growth, allocation and water relations; reproductive biology of trees including, sexual and asexual reproductive strategies. Offered first half of semester. Effective Fall 2021
FOR 816	Forest Ecosystem Processes Fall of every year. 2(1-2) P: FOR 812 and FOR 814 R: Open to graduate students in the Department of Forestry.
NEW	Climate, physiography and soils; disturbance regimes; stand dynamics and succession; element cycling within forest ecosystems and between forest ecosystems and the atmosphere. Offered second half of semester. Effective Fall 2021
FOR 818	Advanced Silviculture Fall of every year. 2(1-2) P: FOR 812 and FOR 814 and (FOR 816 or concurrently) R: Open to graduate students in the Department of Forestry.
NEW	Application of prescriptions to manage the composition, growth and health of forest stands, including techniques for establishment, thinning, timber stand improvement, and regeneration. Offered second half of semester. Effective Fall 2021
CSS 824	Sustainable Agriculture and Farming Systems Field Practicum Fall of every year. 2(0-4) Interdepartmental with Entomology. RB: Some knowledge of food systems either at the level of production, processing, storage or resale from either a natural or social science background R: Open to graduate students in the Ecological Food and Farming Systems specialization or approval of department.
NEW	Economic, environmental and social considerations in sustainable food systems. Field visits to farm and food system operations in Michigan Offered first half of semester. Field trips required. Effective Spring 2021

CSS 826	Sustainable Agriculture and Farming Systems Capstone Seminar Spring of every year. 1(1-0) Interdepartmental with Entomology. P: CSS 824 RB: Knowledge of food systems either at the level of production, processing, storage or resale from either a natural or social science background and sufficient research experience in this area to develop a lecture/discussion topic based on the student's primary research/scholarly area R: Open to graduate students in the Ecological Food and Farming Systems specialization or approval of department.
NEW	Interdisciplinary exploration of food system research and scholarship using a sustainability framework Effective Spring 2021
CSS 892B	Ecological Food and Farming Systems Seminar Fall of every year. Spring of every year. 1 credit. Interdepartmental with Community, Ag, Recreation & Res Studies. Experiential learning, and multidisciplinary and applied research, in ecological food and farming systems. <u>DELETE COURSE</u> Effective Spring 2021

COLLEGE OF ENGINEERING

CE 803	Structural Dynamics Smart Materials and Structures Fall of every year. Spring of even years. 4(1-0) 3(3-0) RB: CE 407 and CE 804 Not open to students with credit in ME 461. C- CE 802 concurrently. Dynamic analysis of beam, frame and truss structures. Classical and finite element formulations. Model analysis and numerical integration techniques. Response to earthquakes. Computing response using a finite element program. This course will introduce the rapid growing research field of smart materials and structures to graduate students and focus on the characteristics of different types of smart materials, including piezoelectric materials, shape memory alloys and polymers, fiber-optics, self-healing concrete, laminated composites, among others. Based on the fundamental understanding of the smart material properties and constitutive behavior, the students will be able to apply the knowledge learned in this course and provide innovative solutions to specific engineering problems. Effective Fall 2003 <u>Effective Fall 2021</u>
CE 814	Soil Dynamics and Geotechnical Earthquake Engineering Fall of odd years. 3(3-0)
NEW	Dynamic response of single-degree-of-freedom foundation systems. Frequency and time domain methods. Dynamic soil properties and damping in soils. Wave propagation in continuum media. Dynamic response of multi-degree of freedom layered systems. Earthquake response spectra. Seismic site response analysis. Seismic geotechnical design. Effective Fall 2021
CE 835	Engineering Management of Pavement Networks Spring of even years. 3(3-0)
REINSTATEMENT	Theoretical and statistical analysis of pavement networks. Engineering monitoring. Determination of distress mechanisms and engineering solutions. Assignment of priorities to engineering actions. Effective Spring 2022

ECE 489 Independent Senior Design
Fall of every year. Spring of every year. Summer of every year. 4(4-0) P: ~~(((ECE 303 and ECE 313 and ECE 320 and ECE 331 and ECE 366 and (ECE 390 or concurrently)) or approval of department) and completion of Tier I writing requirement) or (CSE 410 or approval of department)) and (ECE 390 or concurrently or approval of department)~~ P: (((ECE 303 and ECE 313 and ECE 320 and ECE 331 and ECE 366 and (ECE 390 or concurrently)) or approval of department) and completion of Tier I writing requirement) or CSE 325} and (ECE 390 or concurrently) R: Open to seniors in the Department of Electrical and Computer Engineering.
Individual design project with software and hardware components.
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 2018~~ Effective Spring 2022

EGR 193 Introduction to Experiential Education
Fall of every year. Spring of every year. Summer of every year. 1(1-0) A student may earn a maximum of 4 credits in all enrollments for this course. ~~RB: Students must have participated in a paid, supervised engineering experience. RB: Any engineering student who has not yet participated in EGR 391, 392, 393, 493, or 494. Exceptions at the discretion of the instruction team. R: Open to freshmen in the College of Engineering. Approval of department. R: Open to undergraduate students in the College of Engineering. Approval of department.~~
A reflection on previous career related work experiences and exploration of future career opportunities. A Career exploration course designed to address a variety of student career development levels and interests.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Fall 2020~~ Effective Spring 2022

COLLEGE OF HUMAN MEDICINE

EM 540 Emergency Medicine for Preclinical Students
Fall of every year. Spring of every year. Summer of every year. 1(1-0) A student may earn a maximum of 2 credits in all enrollments for this course. R: Open to students in the College of Human Medicine or in the College of Osteopathic Medicine.
A precepting experience in the principles of emergency care in the hospital.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
SA: HM 540
DELETE COURSE
Effective Fall 2021

EM 630 Emergency Medicine Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P: ~~{(FM 608 or MED 608 or PHD 600 or SUR 608) and (FM 608 or MED 608 or PHD 600 or SUR 608)}~~ or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Clinical diagnosis and treatment of the undifferentiated patient in the emergency department setting.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
SA: HM 630
DELETE COURSE
Effective Fall 2021

- CEM 141 General Chemistry
Fall of every year. Spring of every year. Summer of every year. 4(4-0) ~~P: ((MTH 103B or concurrently) or (MTH 103 or concurrently) or (MTH 110 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 152H or concurrently) or LB 118) or designated score on Mathematics Placement test~~ P: ((MTH 103B or concurrently) or (MTH 103 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 152H or concurrently) or LB 118) or designated score on Mathematics Placement test Not open to students with credit in CEM 181H or CEM 151 or LB 171.
Elements and compounds; reactions; stoichiometry; thermochemistry; atomic structure; chemical bonding; states of matter; solutions; acids and bases; aqueous equilibria.
~~Effective Spring 2020~~ Effective Fall 2020
- MTH 103 College Algebra
Fall of every year. Spring of every year. Summer of every year. 3(3-0) ~~P: (MTH 1825) or designated score on Mathematics Placement test~~ P: Designated score on Mathematics Placement test Not open to students with credit in MTH 116 or MTH 103B.
Number systems; functions and relations; exponents and logarithms; elementary theory of equations; inequalities; and systems of equations.
SA: LBS 117
~~Effective Summer 2019~~ Effective Fall 2020
- MTH 116 College Algebra and Trigonometry
Fall of every year. Spring of every year. Summer of every year. 5(5-0) ~~P: (MTH 1825) or designated score on Mathematics Placement test~~ P: Designated score on Mathematics Placement test Not open to students with credit in MTH 103.
Functions and graphs. Equations and inequalities. Exponential and logarithmic functions. Trigonometric functions. Systems of equations. Binomial theorem.
SA: LBS 117
~~Effective Fall 2013~~ Effective Fall 2020
- MMG 301 Introductory Microbiology
Fall of every year. Spring of every year. Summer of every year. 3(3-0) ~~P: (BS 161 or LB 145 or BS 181H) and ((CEM 251 or concurrently) or (CEM 351 or concurrently) or (CEM 143 or concurrently))~~ P: (BS 161 or LB 145 or BS 181H) and ((CEM 251 or concurrently) or (CEM 351 or concurrently) or (CEM 143 or concurrently) or (LB 271 or concurrently))
Fundamentals of microbiology, including microbial structure and function, nutrition and growth, death and control. Importance and applications of major microbial groups.
SA: MIC 301
~~Effective Spring 2014~~ Effective Fall 2021
- MMG 365 Medical Microbiology
Spring of every year. 3(3-0) Interdepartmental with Biomedical Laboratory Diagnostics. ~~P: (BS 161 and CEM 141) and (MMG 201 or MMG 301)~~ P: (BS 161 or LB 145) and (MMG 201 or MMG 301) and (CEM 141 or LB 171) Not open to students with credit in MMG 463.
Laboratory diagnosis, disease and epidemiology of the most common bacterial, viral, fungal and parasitic pathogens and concepts in infectious disease control, prevention and treatment.
~~Effective Spring 2018~~ Effective Fall 2021

- MMG 408 Advanced Microbiology Laboratory (W)
Fall of every year. 3(1-6) P: (MMG 302 and (MMG 431 or concurrently)) and completion of Tier I writing requirement R: ~~Open to students in the Department of Microbiology and Molecular Genetics or in the Genetics Major or in the Environmental Biology/Microbiology Major or in the Microbiology Major.~~ R: Open to students in the Environmental Biology/Microbiology Major or in the Genomics and Molecular Genetics Major or in the Microbiology Major or in the Lyman Briggs Environmental/Biology/Microbiology Coordinate Major or in the Lyman Briggs Genomics and Molecular Genetics Coordinate Major or in the Lyman Briggs Microbiology Coordinate Major.
Microbiological techniques and procedures to study physiology and genetics of bacteria and bacteriophages. Collection and critical assessment of quantitative data and written communication of results.
SA: MPH 408
~~Effective Spring 2014~~ Effective Fall 2019
- MMG 425 Microbial Ecology
~~Fall of every year.~~ Spring of every year. 3(3-0) Interdepartmental with Crop and Soil Sciences. RB: MMG 301
Microbial population and community interactions. Microbial activities in natural systems, including associations with plants or animals.
SA: MPH 425
~~Effective Spring 2014~~ Effective Fall 2019
- MMG 531 Medical Immunology
Fall of every year. 2(2-0) R: Open to graduate-professional students in the College of Osteopathic Medicine.
Basic principles of immunology. Overview of concepts and terminology in relation to human disease defenses.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Fall 2013~~ Effective Fall 2018
- PLB 415 Plant Physiology
Spring of every year. 3(3-0) ~~P: (CEM 143 or CEM 251 or CEM 351) and (BS 161 or LB 145 or BS 181H)~~ P: (CEM 143 or CEM 251 or CEM 351 or LB 271) and (BS 161 or LB 145 or BS 181H)
Principles of plant metabolism, growth, and development. Photosynthesis, water relations, nitrogen metabolism, and cell wall biosynthesis. Environmental and hormonal factors that control plant growth and development. Gene regulation and genetic engineering of plants.
SA: PLB 414
~~Effective Fall 2014~~ Effective Spring 2022
- PLB 416L Plant Physiology Laboratory
Spring of every year. 2(1-3) ~~P: (CEM 143 or CEM 351 or CEM 251) and (BS 161 or LB 145 or BS 181H) and (PLB 415 or concurrently) and (BS 171 or BS 191H or LB 145 or approval of department)~~ P: (CEM 143 or CEM 351 or CEM 251 or LB 271) and (BS 161 or LB 145 or BS 181H) and (PLB 415 or concurrently) and (BS 171 or BS 191H or LB 145 or approval of department)
Experimental methods and experiment design in plant physiology and molecular biology, with emphasis in photosynthesis, water relations, plant growth, plant development, genetics and gene regulation. Communication of scientific information in written and graphical format.
~~Effective Spring 2021~~ Effective Spring 2022

COLLEGE OF NURSING

- 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.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Fall 2018~~ Effective Fall 2021
- 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.
Request the use of the Pass-No Grade (P-N) system.
~~Effective Fall 2018~~ Effective Spring 2022

COLLEGE OF OSTEOPATHIC MEDICINE

- OST 558 Pediatrics III
Fall of every year. 1(1-0) R: Open to graduate students in the College of Osteopathic Medicine.
~~Normal structure, function and pathologies of the behavioral, cardiovascular, hematopoietic and respiratory systems as they relate to the pediatric population. Ethical considerations in pediatrics.~~
Normal structure, function, and pathologies of the behavioral, cardiovascular, and hematopoietic systems as they relate to the pediatric population.
Request the use of the Pass-No Grade (P-N) system.
~~Request the use of ET-Extension to postpone grading.~~
~~The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.~~
~~Effective Fall 2020~~ Effective Fall 2021
- OST 559 Pediatrics IV
Spring of every year. 1(1-0) R: Open to graduate students in the College of Osteopathic Medicine.
- NEW Normal structure, function, and pathologies of the respiratory system as it relates to the pediatric population. Approach to pediatric fever, congenital infections, the acutely ill child, and ethical considerations in pediatrics.
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 2022
- OST 622 Addiction Medicine
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to graduate students in the College of Osteopathic Medicine. Approval of college.
- NEW Introduces students to the fundamentals of Addiction Medicine. The course aims to increase knowledge, basics of diagnosis, medical care, and awareness of substance use disorders and of persons with substance use disorders and substance-related health conditions. Included is overviews of the pharmacology and subsequent changes in neurobiology for multiple substances that are frequently misused, as well as symptoms of intoxication and withdraw from these substances. Overview of medication for opioid use disorders, safer medication prescribing and prevention and treatment.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
Effective Fall 2021

- OST 623 Board Preparation
Fall of every year. Spring of every year. Summer of every year. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open to graduate students in the College of Osteopathic Medicine. Approval of college.
- NEW This virtual rotation is designed to allow time for independent study prior to COMLEX Level 2-CE board exam.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
Effective Fall 2021
- OST 624 Essentials of Diabetes
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to graduate students in the College of Osteopathic Medicine. Approval of college.
- NEW This virtual clerkship elective rotation that focuses on increasing the knowledge of the care of patients with all types of diabetes. This rotation will explore the pathophysiology, epidemiology, clinical research and treatment of diabetes.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
Effective Fall 2021