# MICHIGAN STATE UNIVERSITY University Committee on Curriculum

# SUBCOMMITTEE A - AGENDA

Via Zoom September 14, 2023 1:30 p.m.

# PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

# **COLLEGE OF AGRICULTURE AND NATURAL RESOURCES**

- Request to change the requirements for the Agricultural Technology Certificate in Agricultural Operations in The Institute of Agricultural Technology.
  - a. Under the heading Requirements for Agricultural Operations make the following change:
    - (1) Change the total credits for the program from '60 to 65' to '60'.
    - (2) In item 1. delete the following courses:

CSS	105	Agricultural Industries Seminar	1
CSS	143	Introduction to Soil Science	2
PLP	105	Fundamentals of Applied Plant Pathology	2

# Add the following courses:

ΑT	100	Career Development in Agricultural Technology	1
CSS	203	World of Soils	2
PLP	105	Fundamentals of Applied Plant Pathology	1
PLP	105L	Fundamentals of Applied Plant Pathology Lab	1

(3) In item 3., delete the following sentence:

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

(4) Delete the note: 'A minimum of 50% of the credits must be completed through the College of Agriculture and Natural Resources.

Effective Spring 2024.

- Request to change the requirements for the Agricultural Technology Certificate in Food Processing, Technology and Safety in The Institute of Agricultural Technology.
  - Under the heading Requirements for Food Processing, Technology and Safety make the following changes:
    - (1) Change the total credits from '60 to 62' to '60'.
    - (2) In item 3., add 'Lansing Community College'.
    - (3) In item 3., delete 'Students at Muskegon Community College are required to complete 28 additional credits of course work'.

Effective Spring 2024.

- 3. Request to change the requirements for the **Agricultural Technology Certificate** in **Fruit and Vegetable Crop Management** in The Institute of Agricultural Technology.
  - Under the heading Requirements for Fruit and Vegetable Crop Management make the following changes:
    - (1) Change the total credits from '60 to 62' to '48'.
    - (2) In item 1., delete the following course:

CSS	143	Introduction Soil Science	2
PLP	105	Fundamentals of Applied Plant Pathology	2

# Add the following courses:

CSS	203	World of Soils	2
PLP	105	Fundamentals of Applied Plant Pathology	1
PLP	105L	Fundamentals of Applied Plant Pathology Lab	1

- (2) In item 2., change the elective credits from '8' to '3'.
- (4) In item 3., change the elective credits from '30' to '23'.
- (5) In item 3., delete 'Students at Muskegon Community College are required to complete 32 additional credits of course work'.
- (6) Delete the note: 'A minimum of 50% of the credits must be completed through the College of Agriculture and Natural Resources.

Effective Spring 2024.

- 4. Request to change the requirements for the **Agricultural Technology Certificate** in **Fruit, Vegetable, and Organic Horticulture Management** in The Institute of Agricultural Technology.
  - a. Under the heading **Requirements for Fruit, Vegetable, and Organic Horticulture Management** make the following changes:
    - (1) In item 1., delete the following courses:

045	Agricultural Communications	2
071	Technical Mathematics	2
206	Training and Pruning Plants	1
218	Irrigation Systems for Horticulture	3
105	Fundamentals of Applied Plant Pathology	2
	071 206 218	<ul> <li>71 Technical Mathematics</li> <li>206 Training and Pruning Plants</li> <li>218 Irrigation Systems for Horticulture</li> </ul>

# Add the following courses:

HRT	203	Introduction to Horticulture	3
HRT	204	Plant Propagation and Use	3
HRT	218	Irrigation Systems for Horticulture	2
PLP	105	Fundamentals of Applied Plant Pathology	1
PLP	105L	Fundamentals of Applied Plant Pathology Lab	1

(2) In item 2., delete the following courses:

ABM	100	Decision-making in the Agri-Food System	3
ABM	222	Agribusiness and Food Industry Sales (W)	3
ΑT	055	Agricultural Finance	3
HRT	203	Principles of Horticulture	3
HRT	204	Plant Propagation	2
HRT	221	Greenhouse Structures and Management	3

# Add the following courses:

ΑE	151	Fabrication Technology	2
ΑE	153	Engine and Equipment Technology	2
AFRE	130	Farm Management I	3
AFRE	222	Agribusiness and Food Industry Sales	3
ΑT	202	Agricultural Regulation, Compliance and Safety	3
CSS	124	Introduction to Sustainable Agriculture and Food Systems	2
CSS	135	Crop Scouting and Investigation	3
HRT	218L	Irrigation Systems for Horticulture Laboratory	1

Effective Spring 2024.

- Request to change the requirements for the Agricultural Technology Certificate in Landscape Management in The Institute of Agricultural Technology.
  - a. Under the heading Requirements for Landscape Management make the following change:
    - (1) Change the total credits from '60 to 62' to '48'.
    - (2) In item 1., delete the following courses:

CSS	143	Introduction to Soil Science	2
HRT	218	Irrigation Systems for Horticulture	3
PLP	105	Fundamentals of Applied Plant Pathology	2

# Add the following courses:

CSS	203	World of Soils	2
HRT	218	Irrigation Systems for Horticulture	2
PLP	105	Fundamentals of Applied Plant Pathology	1
PLP	105L	Fundamentals of Applied Plant Pathology	1

- (3) Delete item 2.
- (4) Renumber item 3. to item 2. And change the total credits from '30' to '22'. And delete the following statement: 'Students at Muskegon Community College are required to complete 32 additional credits of course work'.
- (5) Delete the note: 'A minimum of 50% of the credits must be completed through the College of Agriculture and Natural Resources.

Effective Spring 2024.

- 6. Request to change the requirements for the **Agricultural Technology Certificate** in **Viticulture** in the Institute of Agricultural Technology.
  - a. Under the heading **Requirements for Viticulture** make the following changes:
    - (1) Change the total credits from '60' to '48'.
    - (2) In item 1. delete the following courses:

CSS	143	Introduction to Soil Science	2
PLP	105	Fundamentals of Applied Plant Pathology	2

# Add the following courses:

CSS	203	World of Soils	2
PLP	105	Fundamentals of Applied Plant Pathology	1
PLP	105L	Fundamentals of Applied Plant Pathology Lab	1

- (3) Change the total credits in item 2. from '7' to '3'.
- (4) Change the total credits in item 3. from '30' to '22'.
- (5) Delete the note: 'A minimum of 50% of the credits must be completed through the College of Agriculture and Natural Resources'.

Effective Spring 2024.

- 7. Request to change the requirements for the **Bachelor of Science** degree in **Dietetics** in the Department of Food Science and Human Nutrition.
  - a. Under the heading Requirements for the Bachelor of Science Degree in Dietetics make the following changes:
    - (1) In item 1., replace paragraph two with the following:

The University's Tier II writing requirement for the Dietetics major is met by completing Human Nutrition and Foods 411. That course is referenced in item 3. a. below.

- (2) In item 3. a., make the following changes:
  - (a) Change the total credits from '45' to '48'.
  - (b) Delete the following course:

HNF 377L Applied Nutrition Assessment Laboratory 1

Add the following courses:

HNF 378 Applied Nutrition Assessment Laboratory 1

HNF 411 Research Methods in Dietetics 3

Effective Spring 2024.

# **COLLEGE OF ENGINEERING**

1. Request to change the requirements in the **Bachelor of Science** degree in **Chemical Engineering** in the Department of Chemical Engineering and Materials Science.

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. b., add the following note:

Note: If BMB 462 is taken to fulfill requirement 3. b., it will also count as a technical elective in item 3. e.

(2) In item 3. e., delete the following statements:

Technical elective courses must include at least 3 credits of engineering topics, denoted with an 'e' next to the course number on the CHE technical elective list.

NOTE: BMB 462 is taken to fulfill requirement 3. b. and will count as a technical elective credit in item 3. e., not as an engineering 'e' topics course.

Effective Fall 2024.

 Request to establish a Graduate Certificate in Foundations in Chemical Engineering in the Department of Chemical Engineering and Materials Science. The University Committee on Graduate Education (UCGS) recommended approval of this request at its March 20, 2023 meeting.

# a. Background Information:

Since early 2000, the Department of Chemical Engineering and Materials Science has offered a two-course sequence in Foundations of Chemical Engineering. These courses have been used to successfully bridge nontraditional students into the chemical engineering graduate program.

This course sequence has, until recently, been unique and continues to be used by other universities to bridge nontraditional students in their chemical engineering programs. Also, these courses have been used by industrial practitioners who work on chemical processes, including mechanical engineers, electrical engineers, control engineers, law students who wanted background for patent law, and also working professionals in the chemical/fuel business desiring to work in a more technical area.

Recently, another institution has started a bridging sequence. The department sees an opportunity to keep our program unique by offering a certificate program with the addition of a third course covering process dynamics/control and process economics/design.

The certificate program will provide students with skills in fundamental chemical engineering skills in thermodynamics, reactor design, heat transfer, fluid flow, separations including distillation and extraction, process control, economics and process design including use of chemical process simulators. The manner in which this course content is packaged and delivered is unique to the chemical engineering program.

## b. Academic Programs Catalog Text:

The Graduate Certificate in Foundations in Chemical Engineering provides a broad base of the key concepts relevant to chemical and biochemical process industries, including thermodynamics; reactor design; fluid flow; heat transfer; separations; and process control, economics, and design. The certificate is appropriate for graduates from other programs who seek to pursue graduate work in chemical engineering and for practitioners trained in other fields who seek to understand and apply chemical-engineering principles. The certificate is available only online.

# Admission

Students are generally expected, but not required, to have bachelor's-level or significant training in a math, science or engineering field. Prospective students are encouraged to contact the Director of Graduate Studies in the Department of Chemical Engineering and Materials Science to determine if their background is a good fit for the certificate.

# Requirements for the Graduate Certificate in Foundations in Chemical Engineering CREDITS

Complete all of the following courses with a minimum grade of 3.0 in each course:

CHE	804	Foundations of Chemical Engineering I	3
CHE	805	Foundations of Chemical Engineering II	3
CHE	806	Foundations of Chemical Engineering III	3

2. Request to establish a **Graduate Certificate** in **Semiconductor Manufacturing, Processing, and Devices** in the Department of Electrical and Computer Engineering and Materials Science. The University Committee on Graduate Education (UCGS) recommended approval of this request at its March 20, 2023 meeting.

#### a. **Background Information**:

Global competitors have incentivized the semiconductor manufacturing industry, to the point that the United States share of commercial semiconductor manufacturing has declined 25% in the last 30 years. To assist with this national need, the CHIPS Act was passed by congress in July 2022 with the goal of strengthening domestic semiconductor manufacturing, design and research, and to reinforce America's chip supply chains. This act includes 52 billion U.S. dollars in manufacturing grants and research investments in the field of semiconductor processing, manufacturing, and research.

A large portion of the funding allocated for the CHIPS Act will be invested in the Midwest. For example, INTEL will invest more than 20 billion U.S. dollars to build new factories for advanced chipmaking in the state of Ohio. Manufacturing in the state of Michigan has traditionally been strong. Two billion U.S. dollars from the CHIPS Act will be dedicated to incentivizing production of semiconductors used by automakers and parts, and the state of Michigan has already started investing in some of the semiconductor processing and manufacturing companies in the state. (Hemlock Semiconductor, KLA, Wacker, SK Siltron, and Calumet Electronics) This graduate certificate at MSU is expected to foster the economic and technological progress in the state, thus making the state more competitive nationwide and creating an option for in-state talent to stay in the state of Michigan.

The main goals for this graduate certificate are to help boost the number of our graduate students that complete semiconductor research training, and the graduate certificate will complement a student's degree program with a set of courses that will make them more competitive in the field of semiconductor processing/manufacturing, and help attract the interest from industry in our graduate program.

# b. Academic Programs Catalog Text:

The Graduate Certificate in Semiconductor Manufacturing, Processing, and Devices is designed to provide students with semiconductor research training that will make them more competitive in the field of semiconductor processing and manufacturing.

# Requirements for the Graduate Certificate in Semiconductor Manufacturing, Processing, and Devices

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Studer	nts must c	complete a minimum of 9 credits from the following courses:	
ECE	813	Advanced VLSI Design	3
ECE	832	Analog Integrated Circuit Design	3
ECE	850	Electrodynamics of Plasmas	3
ECE	870	Introduction to Micro-Electro-Mechanical Systems	3
ECE	871	Micro-electro-mechanical Systems Fabrication	3
ECE	874	Physical Electronics	3
ECE	875	Electronic Devices	3
ECE	877	Cleanroom Procedures	3
ECE	931C	Properties of Semiconductors	3
ECE	989	Advanced Topics in Plasma	3

Effective Spring 2024.

# LYMAN BRIGGS COLLEGE

1. Request to change the name of the History, Philosophy and Sociology of Science major leading to the Bachelor of Science Degree in Lyman Briggs College to Science and Society. No new students are to be admitted to the History, Philosophy and Sociology of Science major effective Spring 2024. No students are to be readmitted to the History, Philosophy and Sociology of Science major effective Spring 2024. Effective Spring 2024, coding for the History, Philosophy and Sociology of Science major will be discontinued and the program will no longer be available in Lyman Briggs College. Students admitted to the major prior to Spring 2024 will be awarded a Bachelor of Science Degree in History, Philosophy and Sociology of Science in Lyman Briggs College. Students admitted to the major Spring 2024 and forward will be awarded a Bachelor of Science Degree in Science and Society in Lyman Briggs College.

Effective Spring 2024.

2. Request to change the name of the **Minor History**, **Philosophy and Sociology of Science** in **Lyman Briggs College** to **Science and Society**.

No new students are to be admitted to the History, Philosophy and Sociology of Science minor effective Spring 2024. No students are to be readmitted to the History, Philosophy and Sociology of Science minor effective Spring 2024. Effective Spring 2024, coding for the History, Philosophy and Sociology of Science minor will be discontinued and the program will no longer be available in Lyman Briggs College. Students admitted to the minor prior to Spring 2024 will be awarded a Minor in History, Philosophy and Sociology of Science in Lyman Briggs College. Students admitted to the minor Spring 2024 and forward will be awarded a Minor in Science and Society in Lyman Briggs College.

Effective Spring 2024.

# PART II - NEW COURSES AND CHANGES

# **COLLEGE OF AGRICULTURE AND NATURAL RESOURCES**

**HNF 300** Experimental Approaches to Foods

> Fall of every year. Spring of every year. 4(2-4) P: ((CEM 143 or concurrently) or (CEM 251 or concurrently)) and completion of Tier I writing requirement P: (CEM 143 or concurrently) or (CEM 251 or concurrently) R: Open to juniors or seniors in the Dietetics Major or in the Food Science Major. R: Open to students in the Food Science Major and open to students in the Dietetics Major.

Effects of preparation methods and ingredient substitutions on chemical and physical properties of food constituents. Effects of changes in chemical and physical properties on functional and sensory attributes of foods.

Effective Summer Semester 2016 Effective Spring Semester 2024

HNF 377I Applied Nutrition Assessment Laboratory

> Fall of every year. 1(0-2) P: HNF 377 or concurrently R: Open to juniors or seniors in the Dietetics Major or in the Nutritional Sciences Major or in the Lyman Briggs Nutritional Sciences Coordinate Major.

Nutrition assessment development for practitioners including community needs. communication skills, anthropometric, dietary, and clinical assessments.

**DELETE COURSE** 

Effective Summer Semester 2023

**HNF 378** Applied Nutrition Assessment Lab

> Fall of every year. 1(0-2) P: HNF 377 or concurrently RB: and Nutritional Sciences Global Health Concentration. R: Open to juniors or seniors in the Dietetics Major.

Nutrition assessment development for dietetics practitioners including: community needs assessments, communication skills, anthropometric assessment, dietary assessment, and clinical assessment.

SA: HNF 377L

Effective Spring Semester 2024

**HNF 411** Research Methods in Dietetics

Spring of every year. 3(3-0) P: (HNF 320 and HNF 377) and completion of Tier I writing

requirement R: Open to undergraduate students in the Dietetics Major or approval of department.

NEW Fundamental approaches to research in dietetics.

Effective Spring Semester 2024

**HNF 440** Foodservice Operations

> Fall of every year. 3(3-0) P: HNF 150 and (HNF 300 or concurrently) R: Open to juniors or seniors in the Dietetics Major. R: Open to students in the Dietetics Major.

Principles, processes and control strategies in foodservice operations. Menu planning, procurement, and on-premise storage and issuance. Purchasing, ethics, production, safety and sanitation.

Effective Fall Semester 2020 Effective Spring Semester 2024

FOR 175 Tree Biology

**NEW** 

Spring of every year. 4(3-3) R: Open to undergraduate students in the Forestry Major or approval of department.

**NEW** Introduction to the foundational biological principles in forest trees. Biological factors responsible for tree growth form and function.

Effective Spring Semester 2024

# **COLLEGE OF ENGINEERING**

CHE 484 Distillation Science and Technology I

Spring of every year. 3(3-0) P: FSC 481

NEW Raw material selection including fruits and types of cereal grains for distilled spirit

production, malting of cereal grains, milling science, water chemistry and mashing theory.

Effective Spring Semester 2024

CHE 485 Distillation Science and Technology II

Summer of every year. 3(3-0) P: FSC 481 and CHE 484

NEW Distillation methods, equipment design and technology, stabilizing, filtration and bottling

of distilled spirits, barrel aging, laboratory control, regulatory aspects, and safety. This class also includes a final project in which students design their own distilled spirit.

Effective Spring Semester 2024

ECE 416 Digital Control

Spring of every year. 3(2-3) 4(3-3) P: ECE 303 and ECE 313 R: Open to juniors or seniors in the Computer Engineering major or in the Electrical Engineering major. R: Open to juniors or seniors

in the Electrical Engineering Major or in the Computer Engineering Major.

State-space models. Analysis and design of control systems using state models. Digital control. Discrete-models of sampled-data systems. Quantization effects and sample-rate selection. System identification. Simulation of nonlinear control systems. Examples of nonlinear phenomena. State of the art of control engineering. Control laboratory.

Effective Fall Semester 2013 Effective Spring Semester 2024

ECE 877 Cleanroom Procedures

Fall of every year. Spring of every year. 3(2-3) R: Open to graduate students in the College of

Engineering.

Cleanroom procedures and safety. Instrumentation for microfabrication processes and

device measurements. Fabrication and testing of devices. Effective Fall Semester 2013 Effective Fall Semester 2024

ECE 929B Antenna Theory

Fall of odd years. Spring of odd years. 4(4-0) 3(3-0) RB: ECE 835 RB: (ECE 835) or ECE 835

Antennas and EM scattering. Radiation by currents and surface fields. Equivalence principle. Receiving antennae. Arrays and synthesis. Integral equations. Current and impedance of wire antennas. Slot, aperture and reflector antennas. Singularity expansion method. Antennas and EM scattering. Radiation by currents and surface fields.

Equivalence principle. Receiving antennas. Integral equations. Current and impedance of

wire antennas. Slot, aperture and reflector antennas.

SA: EE 929B

Effective Fall Semester 2002 Effective Fall Semester 2024

# **COLLEGE OF HUMAN MEDICINE**

EM 541 Wilderness First Aid Elective

Spring of every year. 1(1-0) P: HM 553 RB: An interest or novice experience in outdoor activities (e.g., hiking, biking, camping, etc.) R: Open to graduate-professional students in the College of

Human Medicine.

NEW Development of foundational concepts and practical hands-on skills to prepare for,

respond to, treat, and evacuate common illnesses and injuries in an austere

environment.

Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 1

semester after the end of the semester of enrollment.

Effective Spring Semester 2023

FM 621 Advanced Addiction Medicine

> Fall of every year. Spring of every year. Summer of every year. 3(3-0) RB: FM 615 or Addition Medicine Intersession R: Open to graduate-professional students in the College of Human

Medicine.

NEW Online non-clinical course exploring beyond the basics of addiction medicine including

the science of substances, trauma, genetics and stigma of addiction, special populations, career exploration and stories of recovery.

Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 2

semesters after the end of the semester of enrollment.

Effective Fall Semester 2023

HM 544 Medical School III for Dual Degree Pathway

> Summer of every year. 14(14-0) RB: Degree in DDS or DMD R: Open to graduate-professional students in the College of Human Modicine. R: Open to graduate-professional students in the

College of Human Medicine. A student may earn a maximum of 32 credits

The beginning of an interdisciplinary, patient centered experience, integrating necessary

biomedical and social sciences and humanities with clinical skills and professional

development. Includes history and physical exam basics. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 1

semester after the end of the semester of enrollment.

Effective Summer Semester 2024

HM 549 Medical School V for Dual Degree Pathway

> Spring of every year. 10(10-0) A student may earn a maximum of 20 credits in all enrollments for this course. P: HM 555 RB: Degree in DDS or DMD R: Open to graduate-professional students in

the College of Human Medicine.

NEW Continuation of an interdisciplinary, patient centered experience, integrating necessary

biomedical and social sciences and humanities with clinical skills and professional

development.

Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 1

semester after the end of the semester of enrollment.

Effective Summer Semester 2024

Student-Designed Non-Clinical Elective HM 606

> Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P: HM 556 R: Open to graduate-

professional students in the College of Human Medicine.

Customized experience of medically-related skills and knowledge. NEW

> Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 2

semesters after the end of the semester of enrollment.

Effective Fall Semester 2023

**NEW** 

# HM 614 Student Designed Elective Clerkchip

Student-Designed Clinical Elective

Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P: HM 556 RB: HM 556 R: Open to graduate-professional students in the College of Human Medicine.

Customized experience of clinical science skills and knowledge. Clinical performance evaluation. Customized experience of clinical science skills and knowledge in a patient care 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.

Effective Summer Semester 2018 Effective Fall Semester 2023

# HM 101

PH 101 Introduction to Public Health

Spring of every year. 3(3-0)

Core public health philosophies and concepts. Health and disease – measures, determinants, health promotion and disease prevention. Introduction to health care delivery systems. Career opportunities in public health.

Effective Fall Semester 2012 Effective Spring Semester 2024

#### HM 801

PH 801 Introduction to Public Health

Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to students in the Public Health Major or in the Public Health Graduate Certificate. R: Open to students in the Public Health Graduate Certificate or in the Public Health Major.

Introduction to public health philosophy and core knowledge areas. Ethical, legal and political considerations. Emphasis on principles and tools for population health, disease prevention and health promotion, health determinants, healthcare and public health systems.

Effective Spring Semester 2018 Effective Spring Semester 2024

#### HM 802

PH 802 Biostatistics for Public Health

Fall of every year. Spring of every year. Summer of every year. 3(3-0) RB: College Algebra. Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to students in the Public Health Major or in the Public Health Graduate Certificate.

Practical applications and methods using software (SAS, Epi-Info) for statistical analysis, database construction, data visualization and interpretation

Effective Spring Semester 2018 Effective Spring Semester 2024

# HM 803

PH 803 Epidemiology and Public Health

Fall of every year. 3(3-0) RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to master's etudents in the Public Health major or in the Public Health Specialization. R: Open to master's students in the Public Health Major. Not open to students with credit in EPI 810.

Distributions and determinants of disease in population. Epidemiologic research, quantitative methods, study designs pros/cons.

Effective Fall Semester 2023 Effective Spring Semester 2024

PH 804

Public Health Policy and Administration

Spring of every year. 3(3-0) RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to master's students in the Public Health Major.

Structural, operational, leadership and components of health policy and public health administration. Community health assessment, advocacy and evaluation within public health agencies and programs. Major business systems used for administration of public health agencies and programs.

Effective Summer Semester 2018 Effective Spring Semester 2024

## HM 805

PH 805

Social and Behavioral Aspects of Public Health

Spring of every year. 3(3-0) RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to master's etudents in the Public Health major or in the Public Health Specialization. R: Open to master's students in the Public Health Major.

Concepts and methods of social and behavioral sciences applied to public health problems and issues.

Effective Spring Semester 2009 Effective Spring Semester 2024

# HM 806

PH 806

**Environmental Factors of Health** 

Spring of every year. 3(3-0) RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Open to master's etudents in the Public Health major or in the Public Health Specialization. R: Open to master's students in the Public Health Major.

Biological, physical and chemical factors that affect health of populations. Regulatory approaches to environmental hazards. Potential impact of environmental agents on health and preventive management approaches.

Effective Spring Semester 2009 Effective Spring Semester 2024

## HM 807

PH 807

Practical Application and Critical Thinking in Public Health

Fall of every year. Spring of every year. Summer of every year. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Critical thinking, reading skills, explanations, problem solving, and decision making in public health using case studies. Questioning assumptions, identifying bias, determining causality, and application of the scientific method. Reporting guidelines and systematic literature reviews.

Effective Summer Semester 2019 Effective Spring Semester 2024

# HM 808

PH 808

Public Health Surveillance

Summer of odd years. 3(3-0) RB: Academic or professional background in public health, epidemiology and/or public health related discipline. R: Open to students in the Public Health Major or approval of college.

Introduction, history, and design of national, state and local public health surveillance systems for communicable diseases, chronic diseases, birth defects, injury, and disasters. Use of surveillance data sources.

Effective Summer Semester 2013 Effective Spring Semester 2024

## HM 825

PH 825

Transition to Graduate Academic Writing

Fall of every year. Spring of every year. Summer of every year. 1(1-0) RB: completion of Tier 2 writing assignment or undergraduate degree R: Open to students in the Public Health Major and open to juniors or seniors or graduate students or approval of college.

Identify and analyze scholarly articles and published research studies to develop effective writing skills within the genre of academic writing and scholarship.

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

Effective Spring Semester 2021 Effective Spring Semester 2024

Principles of Public Health Leadership

Fall of every year. Spring of every year. Summer of every year. 1(1-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Context, competencies and core leadership skills. Theories and research in public health and related organizations. Best practices, leadership styles, professional identity. Future leadership challenges.

Effective Summer Semester 2018 Effective Spring Semester 2024

## HM 828

PH 828 Community Engagement in Public Health Practice

Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to graduate students in the Public Health Major.

Methods, ethics, and issues in community engaged practice and scholarship.

Effective Fall Semester 2018 Effective Spring Semester 2024

# HM 831

PH 831 Communicable Disease in Public Health

Fall of even years. 3(3-0) P: HM 801 and HM 803 P: PH 801 and PH 803 RB: Academic or professional background in public health or public health related discipline. Undergraduate level math or statistics course work. R: Open to students in the Public Health Major or approval of college.

Fundamentals of communicable disease transmission. Overview of methods for prevention and control of communicable disease. Agents and organisms of public health significance.

Effective Fall Semester 2009 Effective Spring Semester 2024

#### HM 832

PH 832 Global Public Health

Spring of even years. 3(3-0) RB: Academic or professional background in public health or public health related discipline. Undergraduate level math or statistics course work. R: Open to students in the Public Health Major or approval of college.

Factors and dynamics that affect global public health. Application of public health principles and policies in international settings. Key international stakeholders and their roles in global public health.

Effective Fall Semester 2010 Effective Spring Semester 2024

#### HM 833

PH 833 Introduction to Pharmaceutical Counterfeiting and Public Health

Fall of odd years. 3(3-0) P: HM 801 P: PH 801 RB: Academic or professional background in public health or public health related discipline. R: Open to students in the Public Health Major or approval of college.

General principles of counterfeiting, counterfeit pharmaceuticals, and how it affects public health. Scope, policy, supply chain management, and health effects are examined using current case examples.

Effective Fall Semester 2009 Effective Spring Semester 2024

## HM 835

PH 835 Independent Study in Public Health

Fall of every year. Spring of every year. Summer of every year. 1 to 9 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open to students in the Public Health Major or approval of college.

Independent study in areas relevant to public health.

Effective Fall Semester 2000 Effective Spring Semester 2024

PH 836 Comparative Global Healthcare Systems

Spring of every year. 3(3-0) RB: Undergraduate degree in science or applied science with experience in a healthcare clinical setting. R: Open to students in the Public Health Major or approval of college.

Public health and culture, environment, psychosocial and economic issues. Healthcare systems and health policies. Community health assessments.

Effective Spring Semester 2010 Effective Spring Semester 2024

## HM 837

PH 837 Poverty and Public Health

Fall of even years. 3(3-0) P: HM 801 P: PH 801 RB: Academic or professional background in public health or public health related discipline. Undergraduate level math or statistics course work. R: Open to students in the Public Health Major or approval of college.

Concepts of health and poverty and their interrelatedness from a global and public health perspective. Roles of international agencies, national policy, gender, socioeconomic status, race, ethnicity, culture, access to resources, and conflict. Role of public health programs in the achievement and maintenance of healthy populations. Struggle to eliminate poverty.

Effective Fall Semester 2009 Effective Spring Semester 2024

# HM 838

PH 838 Cultural Aspects of Public Health Practice

Fall of every year. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, undergraduate level math or statistics coursework R: Open to students in the Public Health Major or approval of college.

Cultural concepts that shape health and illness. Major issues and trends in global health. Cultural and socioeconomic factors related to work with diverse populations.

Applications for public health practice.

Effective Fall Semester 2010 Effective Spring Semester 2024

#### HM 840

PH 840 Public Health Finance

Spring of odd years. 3(3-0) RB: Academic or professional background in public health or public health related discipline, experience with databases. R: Open to students in the Public Health Major or approval of college.

Issues surrounding financial administration of health service organizations. Pragmatic side of healthcare finance, incorporating healthcare economics.

Effective Fall Semester 2011 Effective Spring Semester 2024

#### HM 841

PH 841 Public Health Policy

Fall of every year. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health major or in the Public Health Specialization or approval of college.

R: Open to students in the Public Health Major or approval of college.

U.S. healthcare delivery and financing systems and their contributions to improving health status.

Effective Fall Semester 2010 Effective Spring Semester 2024

#### HM 842

PH 842 Introduction to Public Health Informatics

Fall of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, experience with databases R: Open to students in the Public Health Major or approval of college.

Survey of information technology applications in the public health domain, functions and tools used to generate public health knowledge. Disease surveillance platforms and webbased public health education, ethical and legal issues surrounding data exchange. Effective Fall Semester 2010 Effective Spring Semester 2024

PH 845

Informatics and Information Technology

Spring of odd years. 3(3-0) P: HM 842 and HM 843 P: PH 842 RB: Academic or professional background in public health and/or public health related discipline, experience with databases R: Open to students in the Public Health Major or approval of college.

Information technology for health informatics systems, principles of relational database systems, operations, information systems, data sets, data standards and classification systems.

Effective Spring Semester 2023 Effective Spring Semester 2024

#### <del>HM 847</del>

PH 847

Public Health in Ghana: A One Health Perspective

Summer of every year. Abroad, Abroad, Abroad <u>Abroad</u> 5(5-0) Interdepartmental with Osteopathic Medicine. RB: Academic or professional background in public health and/or public health related discipline; undergraduate level health-related discipline R: Approval of college; application required.

Major public health issues in Ghana from a One Health perspective; interface between Western and traditional health care beliefs and practices in Ghana; community engagement experience employing participatory research methods with emphasis on social justice and ethical conduct of research.

Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.

Effective Summer Semester 2024 Effective Summer Semester 2024

#### HM 852

PH 852

Outbreak Investigations in Public Health

Spring of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, experience with databases R: Open to students in the Public Health Major or approval of college.

Process for conducting public health outbreak investigations including the role of local, state, federal and international agencies. Legal, political, media and law enforcement issues

Effective Spring Semester 2011 Effective Spring Semester 2024

#### <del>HM 853</del>

PH 853

Public Health Program/Intervention Evaluation

Fall of even years. 3(3-0) P: HM 801 P: PH 801 RB: Academic or professional background in public health and/or public health related discipline R: Open to graduate students in the Public Health Major or approval of college.

Introduce public health program evaluation methods/tools. Causal inference criteria, standard evaluation guides, procedural and outcome evaluation methods and needs assessment and performance monitoring methods. Integrates epidemiology, biostatistics and public health knowledge pertaining to program evaluation.

Effective Fall Semester 2010 Effective Spring Semester 2024

#### HM 854

PH 854

Health Equity Framework For Public Health Practice

Spring of odd years. 3(3-0) RB: Academic or professional background in Public Health and or public health related discipline R: Open to students in the Public Health major or in the Public Health Specialization or approval of college.

R: Open to students in the Public Health Major or approval of college.

Social justice and health equity framework for the practice of public health with analysis of persistent health disparity across race, class, gender, and other forms of difference. Effective Spring Semester 2011 Effective Spring Semester 2024

PH 861 Introduction to Public Health Nutrition

Spring of odd years. 3(3-0) RB: Academic or professional background in public health or public health related discipline, experience with databases R: Open to students in the Public Health Major or approval of college.

Biological principles of nutrition and physical activity with public health focus. Nutritional issues in specific populations. Introduction to malnutrition, current issues in nutrition, role of nutrition in chronic diseases, and nutrition policy and intervention programs.

Effective Fall Semester 2011 Effective Spring Semester 2024

#### HM 862

PH 862 Global Pandemics and Public Health Systems, Law, and Community Impacts

Fall of every year. Spring of every year. 3(3-0) R: Open to students in the Public Health Major and open to juniors or seniors or graduate students or approval of college.

Public health systems and response to pandemics including public health law and ethics, disease transmission, testing and treatment, and social and community context.

Effective Spring Semester 2021 Effective Spring Semester 2024

#### HM 863

PH 863 Parasitic Diseases and Public Health in Developing Countries

Spring of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, knowledge of parasitology R: Open to students in the Public Health Major or approval of college.

Nature, impact and control of parasitic diseases in developing countries. Effective Spring Semester 2012 Effective Spring Semester 2024

#### HM 864

PH 864 Intersections of Human and Animal Health

Summer of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, experience with databases R: Open to graduate students in the Public Health Major or approval of college.

Epidemiology and preventive medicine disease control methods for the control of infectious diseases and environmental health issues shared by animals and people.

Effective Summer Semester 2011 Effective Spring Semester 2024

# HM 865

PH 865 Vitamins and Minerals: Risks to Public Health

Spring of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Introduction to public health issues in vitamin and mineral nutrition, including biological roles, human requirements, and consequences of deficiency and excesses. Current issues regarding specific micronutrient status in U.S. and worldwide. Current and proposed population-based interventions.

Effective Spring Semester 2012 Effective Spring Semester 2024

#### HM 868

PH 868 Integrated Research Study Design and Informatics

Fall of odd years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline, nursing or allied health R: Open to students in the Public Health Major or approval of college.

Introduction to clinical trial phases, research design, informatics aims, informatics platforms and datum lifecycle.

Effective Fall Semester 2011 Effective Summer Semester 2024

PH 871

Vaccine Preventable Diseases of Public Health Importance

Spring of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Vaccine-preventable diseases of importance to the public health and the global community. Basic epidemiology, surveillance, vaccine updates, status of the vaccination programs, associated cost, benefits, and related public health policies. Current controversies associated with national and international disease control, elimination, and eradication campaigns.

Effective Spring Semester 2012 Effective Spring Semester 2024

#### HM 873

PH 873

Maternal and Child Health: A Global Public Health Perspective

Spring of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Introduction to historical and cultural foundations of maternal and child global public health. Health care needs, health determinants and disparities, programs, policies and public health issues affecting women and children.

Effective Spring Semester 2012 Effective Spring Semester 2024

#### HM 876

PH 876

Nutrition and Chronic Diseases: Living Longer and Healthier

Summer of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Role of nutrition and physical activity in chronic diseases with emphasis on macronutrients. Relationship between obesity and health and socioeconomic disparities in the United States and current policies. Overview of nutrition transition and impact on developing nations.

Effective Summer Semester 2012 Effective Spring Semester 2024

# HM 877

PH 877

Public Health Nutrition and the Life Stages

Fall of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Effect of nutrition on growth and development. Role of public health interventions throughout life. Emphasis on at-risk populations in the United States and worldwide. Survey of current programs addressing specific public health nutrition concerns.

Effective Fall Semester 2012 Effective Spring Semester 2024

#### HM 878

PH 878

Applied Biostatistics for Public Health Practitioners

Fall of even years. Spring of every year. 3(3-0) P: HM 802 P: PH 802 RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or in the Public Health Graduate Certificate.

Intermediate techniques and applications of multivariable logistic and linear regression in public health. Interpretation of statistical models.

Effective Spring Semester 2018 Effective Spring Semester 2024

# HM 880

PH 880

Study Design and Research Methods for Public Health Practice

Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: HM 802 and HM 803 P: PH 802 and PH 803 RB: Academic or professional background in public health and/or public health related discipline, experience with databases R: Open to students in the Public Health Major or approval of college. Not open to students with credit in VM 830.

Examination of empirical and logical basis of public health research. Identification of research questions, study design, data collection and qualitative and quantitative approaches. Reporting of findings. Proposal writing. Ethical considerations in research. Effective Summer Semester 2018 Effective Spring Semester 2024

PH 881

Pathogenesis of Parasitic Infections Important to Public Health

Summer of every year. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Specific causes and progression of major parasitic diseases important to global public health; diverse aspects of the host's responses to the invasion by these organisms; protective and pathogenic immune responses; development of clinical disease; role of chemotherapy development of clinical disease; effects of chemotherapeutic agents; epidemiological discussion of the importance of quantification of the pathology and clinical disease seen in populations.

Effective Summer Semester 2012 Effective Spring Semester 2024

#### HM 882

PH 882

Public Health Nutrition: Assessment and Development of Population-Based Interventions Fall of even years. 3(3-0) RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Assessment of nutritional and physical activity on a population level. Identification of atrisk populations. Collection, interpretation and application of data for developing interventions and evaluating behavior change and health outcomes. Role of public health and national nutrition institutions.

Effective Fall Semester 2012 Effective Spring Semester 2024

## HM 880

PH 889

Applied Epidemiologic Methods for Public Health Practitioners

Fall of even years. 3(3-0) Interdepartmental with Epidemiology. P: HM 802 and HM 803 P: PH 802 and PH 803 RB: Academic or professional background in public health and/or public health related discipline R: Open to students in the Public Health Major or approval of college.

Identification and conceptualization of public health problems. Generation of testable hypotheses and appropriate data sets. Interpretation of appropriate measures of associations. Evaluation of validity and generalizability of results and ethical issues surrounding the use of humans in epidemiological research. Real case studies are used to analyze study design including the role of chance, bias, misclassification, effect measure modification, interaction, and missing data.

Effective Fall Semester 2012 Effective Spring Semester 2024

## HM 891

PH 891

Introduction to Public Health Practicum

Fall of every year. Spring of every year. Summer of every year. 1(1-0) P: HM 801 P: PH 801 RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Approval of college.

Preparatory work for practicum placement. Special projects arranged by an individual student and faculty member in areas supporting practicum placement.

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

Effective Fall Semester 2012 Effective Spring Semester 2024

#### HM 802

PH 892

Public Health Applied Practice Experience

Fall of every year. Spring of every year. Summer of every year. 1 to 8 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P: HM 801 and HM 891 P: PH 801 and PH 891 RB: Academic or professional background in public health or public health-related discipline, undergraduate level math or statistics course work. R: Approval of college.

Professional practicum.

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

Effective Summer Semester 2020 Effective Spring Semester 2024

PH 893 Public Health Integrative Learning Experience

Fall of every year. Spring of every year, Summer of every year, 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course, P: HM 801 and HM 801 and HM 802 P: PH 801 and PH 891 and PH 892 RB: Academic or professional background in public health and/or public health related discipline, undergraduate level math or statistics coursework R: Approval of college.

Capstone experience.

Effective Summer Semester 2019 Effective Spring Semester 2024

**SUR 635** Perioperative Trauma Medicine

> Fall of every year. Spring of every year. Summer of every year. 6(6-0) A student may earn a maximum of 12 credits in all enrollments for this course. P: SUR 641 RB: DDS. DMD R: Open to graduate-professional students in the College of Human Medicine.

Assessment and management of perioperative medical issues in a trauma surgery

environment.

Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 1

semester after the end of the semester of enrollment.

Effective Summer Semester 2023

# LYMAN BRIGGS COLLEGE

Introduction to History, Philosophy, and Sociology of Scionco LB 133

Introduction to Science and Society

Fall of every year. Spring of every year. 4(4-0) P: Designated score on English Placement test Re Open to students in the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Specialization. R: Open to students in the Lyman Briggs College. Not open to etudents with credit in RCAH 111 or WRA 101 or WRA 195H. Not open to students with credit in MC 111 or RCAH 111 or WRA 101 or WRA 195H.

Introduction to the history, philosophy, and sociology of science, technology, the environment, and medicine. Instruction and practice in formal writing. Introduction to the science of society, technology, the environment, and medicine. Instruction and practice in formal writing.

SA: LBS 133

Effective Fall Semester 2016 Effective Fall Semester 2023

LB 290A Directed Study-Multidisciplinary

> Fall of every year. Spring of every year. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open to students in the Lyman Briggs College. R: Open to students in the Lyman Briggs College or in the .

Directed studies involving at least two Lyman Briggs College curricular areas: biology, chemistry, physics, mathematics, history, philosophy, and sociology of science. Directed studies involving at least two Lyman Briggs College curricular areas: biology, chemistry, physics, mathematics, and science and society.

SA: LBS 290A

Effective Spring Semester 2014 Effective Fall Semester 2023

Topics in History, Philosophy, and Sociology of Science (W) LB 330

Topics in Science and Society (W)

Fall of every year. Spring of every year. Summer of odd years. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Specialization. R: Open to students in the Lyman Briggs College.

Topics in history, philosophy, and sociology of science, technology, the environment, and modicine. Topics in science and society, technology, the environment, and medicine. SA: LBS 330

Effective Spring Semester 2014 Effective Fall Semester 2023

**NEW** 

# LB 490A Advanced Directed Study--Multidisciplinary

Fall of every year. Spring of every year. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open to students in the Lyman Briggs College.

Directed advanced studies involving at least two Lyman Briggs College curricular areas: biology, chemistry, physics, mathematics, history, philosophy, sociology of science, and computing. Directed advanced studies involving at least two Lyman Briggs College curricular areas: biology, chemistry, physics, mathematics, science and society, and computing.

SA: LBS 490A

Effective Spring Semester 2014 Effective Fall Semester 2023

# LB 490E Advanced Directed Study History, Philosophy, Sociology of Science (W)

Advanced Directed Study--Science and Society (W)

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. P: (LB 133) or completion of Tier I writing requirement R: Open to students in the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Specialization.

Directed advanced studies in history, philosophy, sociology of science, technology, the environment, or medicine. Directed advanced studies in science and society, technology, the environment, or medicine.

SA: LBS 490E

Effective Spring Semester 2014 Effective Fall Semester 2023

# **COLLEGE OF NATURAL SCIENCE**

# GLG 813 Watershed Hydrology

Spring of every year. Spring of odd years. 4(3-1) 3(3-0)

Watershed hydrology covering the physical, chemical, and isotopic characteristics of river runoff generation from the pore to the catchment scale.

Effective Summer Semester 2019 Effective Spring Semester 2023

# **COLLEGE OF NURSING**

# NUR 221 Future of Nursing: Explore Potential Career Opportunities and Graduate Education

Spring of every year. 2(2-0) R: Open to students in the B\_BSN1Nursing Major or in the Prenursing Major or approval of college.

R: Open to students in the Nursing Major or in the Prenursing Major or approval of college.

Fosters student motivation in pursuing advanced degrees in nursing. The course will examine perspectives related to the future of nursing and provide the opportunity for students to explore post-BSN career opportunities and the options for graduate education in nursing.

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

Effective Spring Semester 2023

# NUR 342 Research, Ethics, and Evidence Based Practice I

Research Ethics & EBP

Fall of every year. Spring of every year. 3(3-0) P: (STT 200 or STT 201) and ((NUR 323 and NUR 333) and completion of Tier I writing requirement)

Evidence-based practice and research methodology to inform ethical nursing practice.

Effective Fall Semester 2019 Effective Summer Semester 2023

# NUR 442 Research, Ethics, and Evidence Based Practice II

Senior Scholarly Capstone Project

Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (NUR 342 and NUR 434 and NUR 438 and NUR 439) and completion of Tier I writing requirement

Application of evidence based practice and research methodology to inform ethical nursing practice.

Effective Fall Semester 2019 Effective Summer Semester 2023

# **COLLEGE OF OSTEOPATHIC MEDICINE**

OST 619 Clerkship Specialized Elective

NEW

Fall of every year. Spring of every year. Summer of every year. 1 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open to graduate-professional

students in the College of Osteopathic Medicine. Approval of college.

Faculty directed study on a specialized course/rotation not within the MSUCOM course catalog

Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 2

semesters after the end of the semester of enrollment.

Effective Fall Semester 2023