

ENTOMOLOGY (ENTOM)

ENTOM/AGROECOL/AGRONOMY/C&E SOC/ENVIR ST 103 – AGROECOLOGY: AN INTRODUCTION TO THE ECOLOGY OF FOOD AND AGRICULTURE

3 credits.

Agroecology has blossomed across the world in recent decades as not only a science, but also a practice, and a movement. Employ the multiple disciplines and perspectives that Agroecology affords to analyze our agricultural and food systems within a broader context of dynamic social and ecological relationships.

Requisites: None

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Repeatable for Credit: No

Last Taught: Fall 2022

ENTOM/ENVIR ST 201 – INSECTS AND HUMAN CULTURE-A SURVEY COURSE IN ENTOMOLOGY

3 credits.

Importance of insects in the environment, emphasizing beneficial insects, disease carriers, and agricultural pests that interfere with the food supply. Environmental problems due to insect control agents.

Requisites: None

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Repeatable for Credit: No

Last Taught: Summer 2023

ENTOM/AGRONOMY/NUTR SCI 203 – INTRODUCTION TO GLOBAL HEALTH

3 credits.

Introduces students to global health concepts through multidisciplinary speakers dedicated to improving health through their unique training. It targets students with an interest in public health and those who wish to learn how their field impacts their global issues.

Requisites: None

Course Designation: Breadth - Social Science

Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Repeatable for Credit: No

Last Taught: Summer 2023

ENTOM/ENVIR ST 205 – OUR PLANET, OUR HEALTH

3 credits.

An introduction to the multiple determinants of health, global disease burden and disparities, foundational global health principles, and the overlap between ecosystem stability, planetary boundaries, and human health. Explore the core fundamentals of global health scholarship, including but not limited to infectious disease, sanitation, and mental health, and also consider ecological perspectives on these issues through the lens of planetary boundaries. Attention is placed on how human-mediated global change (e.g. climate change, biodiversity loss, land-use patterns, geochemical cycling, agricultural practice) impacts human health and the ecosystem services we depend on. An overview of pertinent issues in sustainability science and planetary health discourse, including the 'Anthropocene' and resilience to understand and critically assess global trends.

Requisites: None

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Repeatable for Credit: No

Last Taught: Summer 2023

ENTOM 289 – HONORS INDEPENDENT STUDY

1-2 credits.

Research work for Honors students under direct guidance of a faculty member in an area of Entomology. Students are responsible for arranging the work and credits with the supervising instructor.

Requisites: Consent of instructor

Course Designation: Honors - Honors Only Courses (H)

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Spring 2005

ENTOM 299 – INDEPENDENT STUDY

1-3 credits.

Research work for students under direct guidance of a faculty member in an area of Entomology. Students are responsible for arranging the work and credits with the supervising instructor.

Requisites: Consent of instructor

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Spring 2023

ENTOM/ZOOLOGY 302 – INTRODUCTION TO ENTOMOLOGY

4 credits.

Principles including morphology and classification.

Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 381

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Repeatable for Credit: No

Last Taught: Spring 2023

ENTOM 321 – PHYSIOLOGY OF INSECTS

3 credits.

Anatomy, histology and basic physiology of organ systems in insects.

Requisites: ZOOLOGY/ENTOM 302 or graduate/professional standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Spring 2021

ENTOM 331 – TAXONOMY OF MATURE INSECTS

4 credits.

Principles of taxonomy, identification and taxonomic morphology of adult insects.

Requisites: ZOOLOGY/ENTOM 302 or graduate/professional standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Fall 2021

ENTOM/M M & I/PATH-BIO/ZOOLOGY 350 – PARASITOLOGY

3 credits.

The biology of water-borne, food-borne, soil-borne and vector-borne parasites of animals including humans. Parasites are explored in the context of transmission, associated disease, diagnosis and treatment options, and environmental, cultural and socioeconomic drivers of disease epidemiology.

Requisites: ZOOLOGY/BIOLOGY 101 and 102, or ZOOLOGY/BIOLOGY/BOTANY 152 or ZOOLOGY 153, or BIOCORE 381

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Repeatable for Credit: No

Last Taught: Spring 2023

ENTOM 351 – PRINCIPLES OF ECONOMIC ENTOMOLOGY

3 credits.

Major economic insects: identification, life histories, bionomics, distribution, control; procedures in fundamental and practical inquiry.

Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, ZOOLOGY 153, or graduate/professional standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Fall 2022

ENTOM/AGRONOMY/HORT/PL PATH/SOIL SCI 354 – DIAGNOSING AND MONITORING PEST AND NUTRIENT STATUS OF FIELD CROPS

1 credit.

Provides students with information necessary to diagnosis and monitor corn, soybean, alfalfa and wheat for pests (insects, weeds, diseases) and nutrient deficiency symptoms including perspectives from Agronomy, Entomology, Horticulture, Plant Pathology and Soil Science. Proper soil and pest sampling information will be provided as will proper cropstaging techniques which are essential for pest and nutrient management.

Requisites: None

Repeatable for Credit: No

Last Taught: Spring 2019

ENTOM/ZOOLOGY 371 – MEDICAL ENTOMOLOGY

3 credits.

Arthropods of medical and veterinary importance, how they affect their hosts and transmit diseases.

Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, ZOOLOGY 153, or graduate/professional standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Spring 2019

ENTOM 375 – SPECIAL TOPICS

1-4 credits.

Specialized subject matter of current interest to undergraduate students.

Requisites: None

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Summer 2023

ENTOM 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION

1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Entomology and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.

Requisites: Consent of instructor

Course Designation: Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Summer 2017

ENTOM 400 – STUDY ABROAD IN ENTOMOLOGY

1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Current enrollment in a UW-Madison study abroad program

Requisites: None

Repeatable for Credit: Yes, unlimited number of completions

ENTOM 432 – TAXONOMY AND BIONOMICS OF IMMATURE INSECTS

4 credits.

Covers anatomy/morphology, taxonomy, and bionomics of immature insects (ordinal and familial levels). Identification of insects (order and family) using taxonomic keys.

Requisites: ZOOLOGY/ENTOM 302 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No**Last Taught:** Spring 2023**ENTOM 450 – BASIC AND APPLIED INSECT ECOLOGY**

3 credits.

Covers population and community ecology, plant-insect interactions, insect biodiversity and biogeography, and applied ecology. Weaves basic ecological theory and principles with their application to entomological problems such as conservation, biological control, agriculture, and insect-vectored diseases of plants and humans. Uses current entomological and ecological scientific literature and draws on examples from a broad range of natural and managed ecosystems. Broadens from pairwise species interactions (e.g., a predator and its prey) to the entire community of organisms and their physical environment. Emphasizes the theoretical principles and historical background underlying the various topics with a link to potential applications in agriculture, conservation, pest management, and/or invasion biology.

Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 152, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No**Last Taught:** Fall 2021**ENTOM 451 – BASIC AND APPLIED INSECT ECOLOGY LABORATORY**

1 credit.

Hands-on experiences such as labs, field trips, computer exercises, and discussions based on readings in the primary literature to enhance and delve into more details on materials introduced in ENTOM 450.

Requisites: ENTOM 450 or concurrent enrollment

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No**Last Taught:** Fall 2017**ENTOM 468 – STUDIES IN FIELD ENTOMOLOGY**

3 credits.

Concentration on structural, behavioral adaptations of insects to diverse habitats; dynamic relations between insects and plants, other animals and other insects.

Requisites: ZOOLOGY/ENTOM 302**Repeatable for Credit:** No**Last Taught:** Summer 2023**ENTOM/BOTANY/ZOOLOGY 473 – PLANT-INSECT INTERACTIONS**

3 credits.

Multiple ways in which arthropods exploit plants, plant traits that deter or augment insects, environmental mediation of these interactions, effects on population dynamics, community ecology and co-evolution, and implications to natural resource management, environmental quality, and sustainable development.

Requisites: F&W ECOL/BOTANY/ZOOLOGY 460, F&W ECOL/ENTOM 500, ENTOM/BOTANY/PL PATH 505, or graduate/professional standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No**Last Taught:** Spring 2022**ENTOM 490 – BIODIVERSITY AND GLOBAL CHANGE**

3 credits.

Explores the impact of global environmental change on biodiversity and the subsequent consequences for ecosystem function and human well-being. Examines species response to these environmental changes, such as migration, adaptation, and extinction, and the implications for the delivery of ecosystem services and planetary health. Applies ecological principles to identify and evaluate practical solutions to pressing environmental challenges.

Requisites: (BIOLOGY/ZOOLOGY 101, BOTANY/BIOLOGY/ZOOLOGY 151, BOTANY/BIOLOGY 130, ZOOLOGY 153, BIOCORE 381, GEOSCI/ATM OCN/ENVIR ST 102, ILS/ENVIR ST 126, GEOG/ENVIR ST 120, 127, or 139) and (MATH 112, 114, 171, or placement into MATH 221) or grad/prof standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

ENTOM/F&W ECOL 500 – INSECTS IN FOREST ECOSYSTEM FUNCTION AND MANAGEMENT

2 credits.

Roles of insects in the functioning of healthy forest ecosystems, tactics for addressing challenges they pose to sustainable natural resource management, and emerging issues such as biological invasions, habitat alteration, and climate change that influence interactions among insects, their microbial associates, forests, and humans.

Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 152, BIOCORE 381, or graduate/professional standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Fall 2015

ENTOM/BOTANY/PL PATH 505 – PLANT-MICROBE INTERACTIONS: MOLECULAR AND ECOLOGICAL ASPECTS

3 credits.

Molecular and ecological aspects of the interactions between plants and microorganisms. Explores many of the themes, from genetic to integrative, of modern biology, and illustrates how study of plant-microbe interactions contributes to understanding of fundamental plant science.

Requisites: MICROBIO 303, GENETICS 466, 468, BIOCHEM 501, 508, or graduate/professional standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Spring 2023

ENTOM/ZOOLOGY 540 – THEORETICAL ECOLOGY

3 credits.

Introduction to theoretical ecology, including hands-on experience in computer modeling.

Requisites: STAT/F&W ECOL/HORT 571

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Fall 2021

ENTOM 570 – SYSTEMS THINKING IN GLOBAL HEALTH

3 credits.

A systems approach to examination of the multiple determinants of health and well-being. Case studies and group projects explore complex issues including, but not limited to, the root causes of infectious and noncommunicable disease, health inequities in the context of global change, and trade-offs in addressing global and planetary health problems, particularly where information is incomplete, projections about future states are uncertain, or social equity concerns must be taken into account as scientific knowledge is applied. Group projects emphasize systems thinking to critically assess global issues. Teamwork and communication skills are required for case study analysis and project management.

Requisites: ENVIR ST/ENTOM 205

Course Designation: Breadth - Social Science

Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Repeatable for Credit: No

Last Taught: Spring 2023

ENTOM 601 – SEMINAR IN METHODS OF SCIENTIFIC ORAL PRESENTATIONS

1 credit.

Training for the presentation of short talks.

Requisites: Senior standing

Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Spring 2016

ENTOM/F&W ECOL/PL PATH/SOIL SCI 606 – COLLOQUIUM IN ENVIRONMENTAL TOXICOLOGY

1 credit.

Current topics in molecular and environmental toxicology and problems related to biologically active substances in the environment. Topics vary each semester. Lectures are by resident and visiting professors and other researchers.

Requisites: ZOOLOGY/BIOLOGY 101 or BOTANY/BIOLOGY 130 or ZOOLOGY/BIOLOGY/BOTANY 151, or graduate/professional standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Spring 2016

ENTOM/GENETICS/ZOOLOGY 624 – MOLECULAR ECOLOGY

3 credits.

Basic principles of molecular ecology. Lecture topics include population genetics, molecular phylogenetics, rates and patterns of evolution, genome evolution, and molecular ecology.

Requisites: GENETICS 466, 467, BIOCORE 383, or graduate student standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Spring 2023

ENTOM/AGRONOMY/F&W ECOL/M&ENVTOX 632 – ECOTOXICOLOGY: THE CHEMICAL PLAYERS

1 credit.

Introduction to natural and man-made toxins/toxicants, their distribution, transport, and fate in the environment.

Requisites: (CHEM 341 or 343) and ((BOTANY/BIOLOGY 130 and ZOOLOGY/BIOLOGY 102) or ZOOLOGY/BIOLOGY/BOTANY 152 or BIOCORE 383); or graduate/professional standing

Repeatable for Credit: No

Last Taught: Fall 2019

ENTOM/AGRONOMY/F&W ECOL/M&ENVTOX 633 – ECOTOXICOLOGY: IMPACTS ON INDIVIDUALS

1 credit.

Addresses absorption, biotransformation, elimination of toxins in a wide variety of taxa (plants, invertebrates, vertebrates).

Requisites: M&ENVTOX/AGRONOMY/ENTOM/F&W ECOL 632

Repeatable for Credit: No

Last Taught: Fall 2019

ENTOM/AGRONOMY/F&W ECOL/M&ENVTOX 634 – ECOTOXICOLOGY: IMPACTS ON POPULATIONS, COMMUNITIES AND ECOSYSTEMS

1 credit.

Focuses on the impact of toxicants on populations, communities, ecosystems, and includes risk evaluation. Includes lectures, current research presentations, and discussions.

Requisites: M&ENVTOX/AGRONOMY/ENTOM/F&W ECOL 633 or declared in Molecular and Environmental Toxicology, PhD program

Repeatable for Credit: No

Last Taught: Fall 2019

ENTOM 681 – SENIOR HONORS THESIS

2-4 credits.

Individual study for undergraduate students in an Honors program completing a thesis in the area of Entomology, as arranged with a faculty member.

Requisites: Consent of instructor

Course Designation: Honors - Honors Only Courses (H)

Repeatable for Credit: No

Last Taught: Fall 2022

ENTOM 682 – SENIOR HONORS THESIS

2-4 credits.

Second semester of individual study for undergraduate students in an Honors program completing a thesis in the area of Entomology, as arranged with a faculty member. ENTOM 681

Requisites: Consent of instructor

Course Designation: Honors - Honors Only Courses (H)

Repeatable for Credit: No

Last Taught: Spring 2023

ENTOM 691 – SENIOR THESIS

2 credits.

Individual study for undergraduate students completing a thesis in the area of Entomology, as arranged with a faculty member.

Requisites: Consent of instructor

Repeatable for Credit: No

Last Taught: Fall 2014

ENTOM 699 – SPECIAL PROBLEMS

1-4 credits.

Individual advanced work in an area of Entomology under the direct guidance of a faculty member.

Requisites: Consent of instructor

Course Designation: Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Spring 2023

ENTOM 701 – ADVANCED TAXONOMY

3 credits.

Requisites: Graduate/professional standing

Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Fall 2022

ENTOM/F&W ECOL 711 – MULTIVARIATE ANALYSIS OF ECOLOGICAL AND COMMUNITY DATA

2 credits.

Examines common methods of multivariate data analysis in ecology and environmental science. Covers methods for the analysis of complex, multidimensional datasets that are collected in the study of plant, invertebrate, fish, and bird communities. Addresses the concurrent analysis of the environmental factors that may drive community distributions. Provides the basis for predictive modeling of distributions across landscapes. General methods covered include ordination (PCA, DCA, NMDS, CCA), clustering (or classification), and other comparative analyses of data matrices (ANOSIM, Mantel tests). Includes an applied, "hands-on" approach on how to use these tools, and the circumstances under which their uses are either appropriate or inappropriate.

Requisites: Graduate/professional standing

Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Last Taught: Spring 2023

ENTOM 799 – PRACTICUM IN ENTOMOLOGY TEACHING

1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.

Requisites: Consent of instructor**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Spring 2022**ENTOM 801 – COLLOQUIUM**

1 credit.

Provides exposure to current research in Entomology. Weekly speakers represent diverse career backgrounds.

Requisites: Graduate/professional standing**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Spring 2023**ENTOM/BOTANY/GENETICS/ZOOLOGY 820 – FOUNDATIONS OF EVOLUTION**

2 credits.

Explore some of the most important themes and debates that have permeated evolutionary biology over the last 50 years. Read key papers related to each controversial topic, debate the pros and cons of competing viewpoints, and reflect on the relevance of the issue to contemporary evolutionary biology.

Requisites: Graduate/professional standing**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Fall 2022**ENTOM 875 – SPECIAL TOPICS**

1-4 credits.

Specialized subject matter of current interest to graduate students.

Requisites: Graduate/professional standing**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** Yes, unlimited number of completions**Last Taught:** Spring 2022**ENTOM 901 – SEMINAR IN ORGANISMAL ENTOMOLOGY**

1 credit.

Presentations from the original literature on developments in natural products chemistry, biochemistry, physiology, developmental biology and/or ultrastructure of insects.

Requisites: Graduate/professional standing**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** Yes, unlimited number of completions**Last Taught:** Fall 2022**ENTOM/AGRONOMY/ATM OCN/BOTANY/ENVIR ST/F&W ECOL/ GEOG/ZOOLOGY 953 – INTRODUCTION TO ECOLOGY RESEARCH AT UW-MADISON**

1-2 credits.

Introduces new graduate students to the diversity of ecologists across the UW-Madison campus. Includes discussions of key topics in professional development, research presentations by faculty members, and discussions of assigned papers with senior graduate students.

Requisites: Graduate/professional standing**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** No**Last Taught:** Fall 2022**ENTOM 990 – GRADUATE RESEARCH AND THESIS**

1-12 credits.

Independent laboratory research in preparation of a graduate thesis under supervision of a faculty member.

Requisites: Consent of instructor**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement**Repeatable for Credit:** Yes, unlimited number of completions**Last Taught:** Summer 2023